PREDICTING THE WEIGHTS OF THE PHYSICAL PARTS OF BROILERS

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CONTENTS

ABSTRACT

PREDICTING THE WEIGHTS OF THE PHYSICAL PARTS OF BROILERS

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Breeding companies advertise their chickens as having been selected for heavier breast meat. However, when comparisons are made between strains, these are normally made at a common age, and under these conditions the heaviest birds will have the heaviest breast meat yield. More meaningful comparisons would be made by relating breast weight to body protein weight, as these are allometrically related. Two experiments were conducted to test the hypothesis that the allometric relationship for each body part is the same irrespective of strain, sex and feed protein content, i.e. that geneticists have not been successful in changing the allometric relationship between breast meat weight and body protein weight. In the first trial, three strains, two sexes and four feed protein levels were used to 6 weeks of age, and in the second, four strains, two sexes and three feed protein levels were used to 12 weeks. Birds were sampled weekly, and the weights of breast meat (no skin or bone) and the meat and skin of the thigh, drum and wing were recorded before determining the body protein content of each of 1526 broilers. The hypothesis could not be corroborated when the data from the two trials were combined so a further trial was conducted to determine the amount of lipid that is deposited in the meat and skin of each of the commercially important parts of the broiler, on the assumption that differences in lipid deposition between strains, sexes and feed protein levels in the various physical parts would assist in explaining the anomalies in the analyses. It was confirmed in the third trial that the small differences between the observed and predicted weights of the physical parts may be accounted for through varying amounts of lipid deposition in these parts, depending on strain, sex and feed protein level, which must be accounted for when using allometry to predict the weights of the physical parts of the broiler at different stages of growth. The data collected in this series of trials may be used to predict the weights of these physical parts more accurately than has been the case to date.

CHAPTER 1

REVIEW OF LITERATURE

1.1 INTRODUCTION

Poultry meat production has increased annually by 8.3 percent over the last decade (Zerehdaran, 2005) and consumption per person in developing countries has increased from 10 to 26 kg, a rise of 2.8 percent per year (Hoffman, 2005). At the same time, the marketing of poultry has been greatly expanded, with a significant increase in the sale of parts and processed products due to the increased consumer preference for leaner meats and for processed poultry food products in developed countries (Hoffman, 2005). Poultry now inhabits second place in world meat production. This increase in the popularity of poultry meat is due to three main factors: its relatively low cost and therefore value for money, its healthy and nutritious image, and the availability of more interesting and convenient forms of further processed poultry. By separating the carcass into parts at the processing plant, these parts may be used for different purposes by the consumer, resulting in value-added products that might realise higher prices in the market place. In more affluent markets the range of value-added products is considerable, and reflects the wide diversity of uses to which poultry meat can be put (Gous, 2001). The success of poultry production has been strongly related to improvements in growth and carcass yield, with breeding companies and nutritionists claiming significant improvements particularly in breast meat yield. This review deals with the growth process in general, with mathematical methods of describing growth, and with the factors that are reported to increase carcass yield, specifically breast meat, in poultry.

1.2 GROWTH OF THE BODY

Growth involves an increase in size of an animal, which is accompanied by changes in body proportions, the latter being referred to as 'development'. Body proportions change in response to changing functions and cell structure with age. Growth is normally accompanied by an orderly sequence of maturational changes and involves accretion of protein and increases in length and size, and not just an increase in weight (Gous, 2001). The growth process includes increases in cell numbers (hyperplasia) and increases in cell size (hypertrophy). The early stages of growth occur mainly through the process of hyperplasia while the later stages are a result mainly of hypertrophy, although this differs for different tissues and species.

The process is complex, being affected by extrinsic, intrinsic and genetic factors. Hormonal influence is the most significant intrinsic factor and food supply and composition the most important extrinsic factor affecting the growth of the various tissues of the body.

Muscle growth starts during embryonic development, and the embryonic period begins with fertilization, which takes place in the upper oviduct, the infundibulum (Figure 1.1). Many spermatozoa enter this area prior to ovulation, but only one plays an active role in the fertilization processes (Grove *et al*., 1964). While the developing egg passes down the oviduct it is subjected to two maturation divisions and becomes covered first by the albumen, then by the shell membranes and finally by the shell (Grove *et al*., 1964; Bellairs and Osmond 2005).

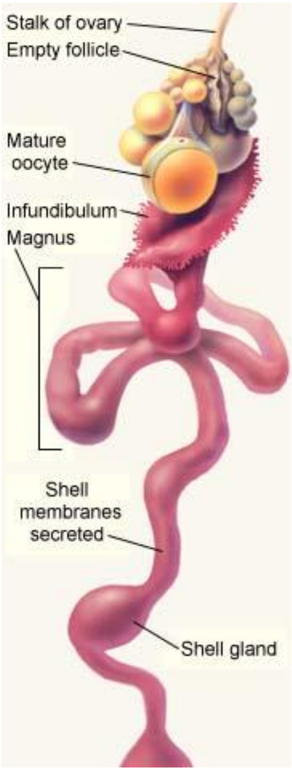

Fig 1.1 Reproductive system of chicken (http://chickscope.beckman.uiuc.edu/explore/embryology/day05/ovary.html Copyright © 1998, University of Illinois at Urbana-Champaign, accessed 24.07.2008)

The process of embryonic development (Table 1.1) has been extensively studied and it has been described in many publications (Bellairs, 1993; Deeming, 2002; Uni and Ferket, 2004; Moore *et al*., 2005). Between the time that the egg is laid and the incubation process begins, no embryonic growth takes place. However, by the time the egg is laid the embryo is in the blastula stage, when the embryo is hollow and spherical. Once the incubation process is initiated the blastula is soon followed by a second embryonic stage, the gastrula. Gastrulation starts during the first few hours of incubation, and this follows three distinct phases which occur not at the same time but in chronological sequence. These phases are the laying down of the embryonic endoderm, mesoderm and the formation of the embryonic axial structures. Endoderm is the origin of the epithelium of the intestinal tract and of its derivatives (liver, gall bladder) and the lining of the respiratory tract. Mesoderm gives rise to the largest number of derivatives: muscles, epithelium of abdominal and pleural cavities, etc. The next phase is concerned with foldings and differential growth of the various parts of the embryo, and with its gradual enclosure within membranes formed by the cell-layers of the extra-embryonic area. For further development of the embryo, the blastoderm gives rise to other structures which are called extra-embryonic membranes. They are the yolk sac, which absorbs nutrients from the yolk and transfers these to the embryo, the amnion and chorion, which surround the embryo and prevent it from becoming dehydrated, and the chorioallantois, which plays a role in respiratory exchange, transporting calcium and storing nitrogenous wastes produced by the embryo. These extra-embryonic membranes perform functions only toward the end of embryo development, and once the chick hatches they become atrophied. These organs have a primitive structure as compared with those of the adult.

1.2.1 Muscle Growth

Muscles are responsible for all movements in the body, including the procurement of food and the peristaltic movement of food through the intestine, so they are of importance in every aspect of growth. However, of greatest interest in poultry production is the development of the lean tissue of the body, as it is this that contributes substantially to the provision of meat for human food. About 46 percent of the protein in the body of a 500g broiler is contained in the edible portion of the body, namely, the meat and skin. This proportion increases to 52 percent by the time the broiler reaches a weight of 2 kg. Approximately 70 percent of the meat and skin of a broiler‘s water (Gous, 2001).

Table 1.1 Stages of embryonic development during the incubation period

Day	
1	First sign of resemblance to a chick embryo Appearance of alimentary tract Appearance of vertebral column Beginning of nervous system Beginning of head Beginning of eye
2	Beginning of heart Beginning of ear Heart beats
3	Beginning of nose Beginning of legs Beginning of wings
4	Beginning of tongue
5	Formation of reproductive organs and differentiation of sex
6	Beginning of beak
8	Beginning of feathers
10	Beginning of hardening of beak
13	Appearance of scales and claws
14	Embryo moves into position suitable for breaking shell
16	Scales, claws and beak becoming firm and horny
17	Beak turns toward air cell
19	Yolk sac begins to enter body cavity
20	Yolk sac completely drawn into body cavity; embryo occupies practically all the space within the egg except the air cell
21	Hatching of chick

http://www.ogpbb.com/chicken-embryo-development/stages-of-chick-embryo-development.html Copyright © 2007 OGPBB accessed 24.07.2008

Skeletal muscle is made up of long, cylindrical, multi-nucleated cells, or myofibres, which extend from the tendon or connective tissue attached to one bone, to a tendon or other connective tissue attached to another bone. During embryological development, muscle fibers are formed from precursor cells, myoblasts, which align in rows and fuse to form multinucleate myotubes. These myotubes synthesise the myofibrillar proteins (myosin, actin, tropomysin, etc.) which are assembled into myofibrils (Goldspink, 1977).

In birds there are several stages of muscle growth, including prenatal muscle development and postnatal growth. In general, for a muscle to grow, it must continually accumulate additional nuclei, to support the accretion of more muscle protein. During embryogenesis, the number of muscle fibers continues to increase; this increase ends shortly after hatch, and myonuclei in muscle fibers do not divide (Moss and Leblond, 1971) therefore, nuclei are added to fibers from outside. A group of unique cells, termed ’satellite cells‘, are the major source of new nuclei during skeletal muscle growth or regeneration. The role of the satellite cell population during normal skeletal growth is to proliferate then donate nuclei to the growing myofiber. Satellite cell proliferation occurs at the beginning of the animal’s growth phase, i.e. during embryonic development, whereas during the late growth phase and in adulthood these cells are mostly quiescent (Schultz *et al*., 1978). In broilers, the number of satellite cells peaks on the second and third days after hatching and then rapidly decline, at around eight days, after which they become quiescent (Halevy *et al*., 2006). However, quiescent satellite cells can rapidly re-enter the cell cycle in response to various muscular stresses, ranging from work overload to major muscle trauma. Depending on the degree of repair required, these activated satellite cells undergo either limited or multiple rounds of cell division, followed by withdrawal from the cell cycle and fusion into existing or newly formed fibers (Schultz and McCormick, 1994; Yablonka-Reuveni, 2004). Satellite cells are considered adult muscle stem cells due to their capacity for self-renewal (Collins *et al*., 2005). Since, in broiler chicks, satellite cells are active on the very first days post hatch only, it is likely that changes in muscle growth associated with environmental or nutritional manipulations during this time are due to alterations in satellite cell proliferation (Halevy *et al*., 2006).

A bird accumulates weight by attempting to grow at its potential rate, this rate differing depending on its weight at a given time (Emmans, 1987). Growth theory suggests that the growth rate of an animal, such as a broiler chicken, will initially steadily increase as the bird grows and that it will then decline as the bird moves towards its final, or mature, live weight. This pattern is illustrated in Fig. 1.2, where the rate of growth of the body (dotted line) is plotted against time. It is apparent that the increase in growth rate up to the maximum is more rapid than the decline in the rate after the maximum. The bird ceases to grow when its mature size is reached.

1.2.2 Chemical and Physical Growth

The chemical and physical composition of the body changes systematically during growth and a description of potential growth must deal with such changes. The potential growth rate of a broiler may be described mathematically, as can be the changes that occur in the chemical and physical composition of the bird during growth, but these equations must be based on actual performance, which is invariably below the potential. Under conditions that are non-limiting the actual growth will be the potential growth. It is possible that the potential growth curves of the major chemical components (protein, water and lipid) are of the same shape. In this case the values of the parameters for mature size and the rate of maturing for each of the components must be known, in order to predict the potential growth of a given kind of bird (Emmans and Kyriazakis, 1999).

1.3 MATHEMATICAL DESCRIPTION OF GROWTH

The size of a chicken changes during development, and because of the differential growth of the body parts, the proportions of the body of the chicken change also (Figure 1.2). Measurements of growth can be analyzed with respect to time (age) or to body weight (Gille, 2004). It is possible to use mathematical equations to define these changes in potential growth under non-limiting conditions (Emmans, 1987). The Gompertz equation adequately describes the development of chickens from birth to maturity (Wilson, 1977; Ricklefs, 1985), and is often favoured over other growth equations because it describes growth in terms of only three parameters, each having a biological meaning: a starting weight (W_0), a mature weight (W_m) and a rate of maturing (B) (Laird, 1966).

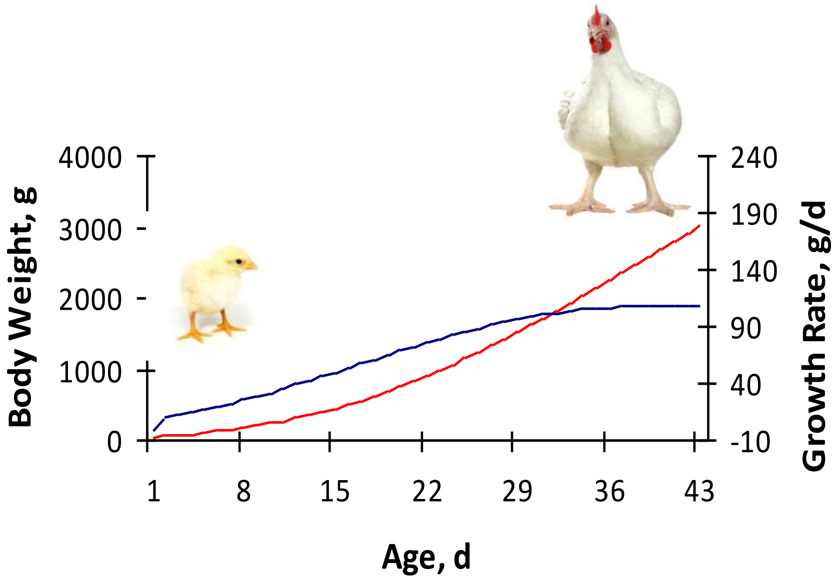

Fig 1.2 Body weight and growth of broiler chickens

1.3.1 The Gompertz Growth Function

This function was developed by an English mathematician, Benjamin Gompertz, for the calculation of mortality rates in humans (Gompertz, 1825). It is one of the most frequently used curves in growth mathematics. It is defined by:

$W_t = W_m \, . \exp(-\exp(-B\,(t - t^*)))$ kg

Where:

W_t is the corresponding measurement (weight) at time t (d).

W_m is the mature weight (kg).

t^* is the time (days, after hatching) at the point of inflection of the curve

B is a rate parameter (/d).

'exp' means '*e* to the power of'

When $t = t^*$ then $W = W_m/e$ and the growth rate, dW/dt, is at a maximum given by (dW/dt) max = $B.\ W_m/e$ kg/day where B = (dW/dt) max e/A day

Another form of this equation, excluding t* and making use of W_0 (weight at day-old) is:

$W_t = W_m. \exp(-\exp((ln(-ln(W_o/W_m))) - B.t))$

In order to determine the values of the parameters in the above equations, it is necessary to grow birds of a similar breed or strain at their potential and to measure their weight at intervals throughout the growth period (Gous, 1990; Martin, 1994). According to Emmans and Fisher (1986), the problem of predicting body growth rate can be approached in one of the following ways

1- By predicting the growth of the empty, feather-free body (EFFB) as a whole;
2- By predicting, separately, the growth of the four chemical components of the EFFB (water, lipid, protein, ash and a small amount of carbohydrate); or
3- By predicting the growth of one of these components and predicting the others in relation to this component.

It has been shown that most of the components of the body in potential growth, other than feathers, can be simply related to the weight of body protein (Gous, 1999), i.e. they share a common rate of maturing (B). The growth of protein in the body may be predicted by means of a Gompertz growth function and as long as the above criterion is met, the growth of water, ash and lipid may be derived from the protein weights, and then by adding together the weights of all these components on each day of the growing period, it is possible to predict the rate of growth of the whole feather-free body. All of the physical components of the broiler, other than feathers, have the same rate of maturing as body protein (Emmans and Fisher, 1986), so the rates of growth of these components may also be predicted in the same way as the chemical components. These relationships are useful in understanding the changes that take place in the bird as it grows, but they are especially interesting in predicting the weights of the various components during growth, and when making comparisons between genotypes (Gous, 2001). Where components share the same rate of maturing they are said to be allometrically related, and in this research, allometry expresses the mathematical relationship between the component weight and that of body protein.

1.3.2 Allometry

In biology, non-isometric scaling is known as allometry. *Alloios* means ‘different’ and is derived from the Greek. Allometry is used to describe the morphological development of species, and is based on the relationship between an organism's size and the size of any part of the organism. It is studied during the growth of a single organism, as a comparison between different organisms of the same species, and between organisms of different species. One of the first to consider allometry was Galileo (1637) (as quoted by Schmidt-Nielsen, 1991), who noted that the bones of large animals are proportionately thicker than those of small animals. He explained this by the square-cube law. 'Weight grows as the cube of the size, while surface area grows as the square of the size. The ratio of these quantities gives a typical value for weight-induced stress, which thus scales as the size'. Allometric relationships have been found in various circumstances, and they have been explained with varying success, often as a result of physical constraints (Schmidt-Nielsen, 1991).

The allometric equation may be graphed on an XY axis, with body size on the X-axis and the size of the component on the Y-axis. Allometry allows scientists to study biological functions as these increase as a power of body size. For instance, more energy is consumed by an elephant, but a mouse probably consumes more energy when that energy is measured as a function of mouse body weight. The allometric equation is generally stated as;

$y = a \cdot x^b$

where;

y = predicted size of body part

x = observed body or body protein weight

a and b = coefficients

Not all allometric comparisons are linear; however when the variables are plotted on (natural) logarithmic coordinates, the result is a straight line, in which the exponent *b* represents the slope of the regression (Schmidt-Nielsen 1991). The equation that compensates for a nonlinear function is:

$\ln y = \ln a + b \ln x$

In the above equation, the value of *b* for the different components of the body may be greater than, equal to or less than unity. Where $b < 1$ the ratio between the component weight and body protein weight decreases as protein weight increases, as in the case of body water. Where $b = 1$, as in the case of body ash, the ratio is constant; and the ratio increases when $b > 1$, as in the case of body lipid.

Accurate predictions of the growth of body components can be obtained by growing birds in non-limiting conditions, and measuring the weights of these components, and that of body protein, at regular intervals throughout the growing period (Gous, 1986; Gous *et al.*, 1990). A Gompertz equation is then fitted to the body protein weights so that accurate estimates of the mature size and rate of maturing of the genotype may be achieved, and estimates of the growth of the chemical and physical components of the body can be predicted from the protein component using the allometric relationships that exist between the different components of the body (Emmans and Fisher, 1986).

Of particular importance to broiler processors currently is the yield of parts of the broiler, particularly breast meat yield. Because the yield of these parts can be predicted with the use of the allometric relationships described above, this technique may be used to substantiate or refute the claims of broiler breeding companies and nutritionists that they have managed to alter these allometric relationships by selection or improved nutrition. As an example of the arguments put forward, the case of breast meat yield is considered in more detail below.

1.4 FACTORS INFLUENCING BREAST MEAT YIELD

According to many researchers breast meat yield is influenced by genetic selection, by nutrition and by environmental factors. Ibe and Nwakalor (1987) suggested that there are differences between genotypes or strains in breast meat yield and that these appear to involve allometric growth, implying one genotype is better suited for specific markets than others. It has been reported that breast meat development can be considerably increased by selection (Le Bihan-Duval *et al.*, 1998; Le Bihan-Duval *et al*., 2001; Le Bihan-Duval, 2004}. Remignon *et al*. (1995) found that this was due to an increase in the number of muscle fibres. Conversely, Berri *et al.* (2001) concluded that the metabolic pattern of the breast was almost unmodified by selection.

The protein, water and mineral contents of breast muscle were significantly altered by age and genotype in a study by Baeza *et al.* (2002) but lipid content was affected only by age. Yet Summers *et al.* (1989) related breast meat yield to weight gain, and suggested that body weight, not age, was the main factor influencing breast yield.

Dietary protein content, or energy to protein (E:P) ratio, has been reported to have a marked effect on the quality of broiler meat, on the yield of edible parts, on carcass fat content, and on breast meat yield (Kidd *et al*., 2004; Lemme *et al*., 2006): low protein diets reduced meat yield and increased fattening, and genetic selection using a low protein diet resulted in a fat line of broilers (Bartov and Plavnik, 1998; Leclercq, 1983). Leclercq (1983) demonstrated that the resultant lean and fat lines required different amounts of dietary protein, and suggested that lean birds were more efficient at transforming dietary protein to carcass protein, whereas fat chickens diverted more amino acids to lipid synthesis and heat production than lean chickens. However, according to Whitehead and Griffin (1986), it is unlikely that dietary differences other than fat, would have influenced body composition: they reported that dietary fat content had the same effect on the growth characteristics of the lean and fat lines. Kemp *et al.* (2005) have shown significant genotype x nutrition interactions in two strains of commercial broiler, where one strain benefited from high protein feeds, demonstrating a positive correlation between dietary protein content and breast meat yield, whereas the other strain did not.

Cahaner and Leenstra (1992a, 1992b) reported that carcass composition and meat yield are dependent on environmental temperature. In their research, meat yield and especially yield of breast meat were reduced at high temperatures. They suggested that breast meat proportion is not an indicator of total protein, but rather a reflection of the distribution of muscles, i.e., body conformation, and that broiler production should be based on breast meat yield rather than on body protein content. Because the correlation between breast muscle proportion and body protein content in their study was low, they believed that leanness rather than a high body protein content would be a good indicator of high breast meat yield. On the other hand, carcass traits such as breast weight and leg weight were reported to be highly genetically correlated with body weight by Gaya *et al*. (2006), and if this were the case, direct selection for total carcass weight should increase the weights of body parts. Indeed, breeding companies such as Aviagen (2008) and Cobb (2008) have suggested that it is possible to alter the body composition of broilers by selection, and that they have been successful in doing so.

The above reports give contradictory and confusing information about the effects of genetic selection, nutrition and the environment on breast meat yield. In none of these reports was the body protein content of the carcass analysed and compared with breast meat yield, i.e. the allometric relationship between breast meat yield and body protein weight was not used as a means of comparing the effects of the different treatments imposed. Given that differences in breast meat yield have been reported between strains, on different feeds and in different environments, but with such comparisons having been made at different body weights, different degrees of maturity or different degrees of fatness, of particular interest in the research that follows this review is whether different genotypes, feeds or environments have an effect on breast meat yield when the birds are compared at the same body protein weight.

CHAPTER 2

EFFECT OF DIETARY PROTEIN ON PERFORMANCE OF THREE BROILER STRAINS AND ON THE ALLOMETRIC RELATIONSHIPS BETWEEN CARCASS PORTIONS AND BODY PROTEIN

2.1 INTRODUCTION

The strong consumer demand for breast meat has resulted in a search for ways of producing chickens that yield greater amounts of this desirable body component. Genetic and nutritional approaches have been used to accomplish this, and the challenge is to be able to predict the effects of genotype, feed and environment on the growth of breast meat and other body components. This may be accomplished by predicting the growth of the component as a proportion of body protein growth, the latter being more easily predicted than its component parts. Models already exist for predicting the growth of body protein as influenced by genotype, feed and environment (Emmans, 1981) and such models may be used to predict the growth of any scaled components of the body, as any components that share the same rate of maturing can be scaled allometrically (Emmans, 1987).

What is needed is a description of the potential protein growth rate of different genotypes, and of the allometric relationships that exist between the important components of the body and body protein. Potential protein growth rates have been described for various genotypes (Hancock *et al*., 1995) using a Gompertz growth function (Gous *et al*., 1999), and in some cases the weights of the components of the body have been measured during growth, from which allometric functions may be derived (Lindsay, 1992: Gous *et al*., 1996). However, little work has been done in characterising these relationships other than describing them in broilers reared on only one feeding programme. There have been many reports of the effect on breast meat yield of feeding different levels of dietary protein (e.g. Kemp *et al*., 2005), but in none of these cases was body protein content measured, without which allometric coefficients cannot be derived, nor can accurate comparisons be made of the nutritional or genetic effects at the same body protein weight (or degree of maturity).

Because broilers have been subjected to selection for over 45 years, and geneticists have in that time improved traits such as body weight, feed conversion efficiency and carcass characteristics (Havenstein *et al*., 2003), it is possible that these allometric relationships may differ between strains. This study was designed to examine the relationships between some important components of the body and body protein among three genotypes and two sexes fed four protein levels over a period of six weeks.

2.2 MATERIALS AND METHODS

Day-old, sexed broiler chickens of three strains available in South Africa, namely, Ross 788, Ross 308 and Cobb 500, were placed in a broiler house at Ukulinga research farm, University of KwaZulu-Natal in April 2006. A total of 48 pens was used with 70 chickens being placed initially per pen and with males and females being reared separately, i.e. eight pens of males and eight of females of each of three strains were used in the trial. The trial was terminated when the birds were 42d of age.

2.2.1 Feeds and feeding procedure

Two basal starter feeds, one high and the other low in protein were formulated (Table 2.1) to contain equal contents of ME and major minerals, using a well balanced amino acid mixture (Table 2.2) derived from the EFG Broiler Growth Model (EFG Software, 2007). These two feeds were blended to produce two additional levels of protein (Table 2.3). The two basal feeds were sampled after mixing and these were analysed for apparent metabolisable energy (AME) using the method of Fisher and McNab (1987), and digestible amino acid content using a Waters amino acid analyser (AOAC, 2003). Birds were given starter feed for first three weeks and grower feed thereafter. Feed and water were offered *ad libitum* throughout the trial.

2.2.2 Measurements

A representative sample of birds in each pen was weighed at weekly intervals up to 42d. Feed allocated to each pen was weighed and transferred to the feeding troughs when necessary. At the end of each week feed remaining in the troughs and in the bag was weighed, to determine the amount of feed consumed during the week.

Table 2.1 Ingredient composition (g/kg) of the two basal feeds used in the trial

	Starter		Finisher	
Ingredient	LP	HP	LP	HP
Maize	532	405	630	485
Soybean full fat	266	470	265	381
Soybean 48	127			
Sunflower 37		334		228
Fish meal 65		555		
Limestone	169	124	176	169
L-lysine HCL	0.1	0.5	0.5	0.9
DL methionine	1.7	3.4	1.3	2.7
L-threonine		0.6		0.4
Vit+min premix	2.5	2.5	2.5	2.5
Choline chloride 60	0.7		7.6	12.9
Virbacox/Salinomycin	0.5	0.5	0.5	0.5
Zinc Bacitracin 15%			0.3	0.3
Salt	3	2	14	
Monocalcium phosphate	16.6	11.6	16.8	16.6
Sodium bicarbonate	3	2.5	6.7	8.4
Oil - Soya	30		50	50

2.2.3 Sampling for portioning and carcass analysis

At day-old, six birds were sampled from each strain x sex, the weights of the parts were dissected and measured then the chicks from each strain and sex were combined for chemical analysis. Two birds were removed from each pen for carcass analysis each week up to the 6th week. These birds were treated in the following way: weight of each bird was recorded after killing by dislocating the neck (without loss of blood), plucked weight was recorded (feather weight calculated by difference), breast, without skin or bone, breast skin, breast bone, thighs, drums, wings, intestine, liver, and remainder. Body parts, except for feathers, from each bird were placed in a separate plastic bag and stored in a freezer until mincing took place. Each chicken was minced separately (except for day-old chicks, which were pooled per strain and sex) and sampled for chemical analysis. Chemical analysis included water, protein (as N using the Dumas method on a LECO N analyser, AOAC, 2003), ash (AOAC, 2003), and gross energy (GE) using a bomb calorimeter. Lipid content was calculated from GE using L = -0.8756 + 0.04754*GE (University of KwaZulu-Natal, unpublished).

Table 2.2 Chemical composition (g/kg) of the two basal feeds used in the formulation (predicted)

	Starter		Finisher	
Nutrient composition*	LP	HP	LP	HP
AME (MJ/kg)	12.6	12.6	13.5	13.5
Crude protein	207	261	153	194
Lysine	10.2	14	7.4	10.1
Methionine	4.5	7.2	3.5	5.3
Met + Cys	7.4	10.3	5.8	7.9
Threonine	6.8	9.2	5	6.7
Tryptophan	2	2.5	1.4	1.9
Arginine	12.8	16	9	11.9
Isoleucine	8	10.4	5.8	7.6
Leucine	16.5	19.1	13.4	15.2
Histidine	5.1	6.1	3.8	4.7
Phe + Tyr	15.3	17.9	11	13.7
Valine	8.9	11.2	6.7	8.4
Calcium	10	10	10	10
Avail. Phosphorous	5	5	5	5

*Digestible amino acids; Met + Cys= Methionine + Cystine; Phe + Tyr = Phenylalanine + Tyrosine

Table 2.3 Treatment, blending proportions, and protein content (g/kg) of starter and grower feeds used

Treatment	HP	LP	Protein in Starter	Protein in Grower
1	100	0	261	194
2	67	33	243	181
3	33	67	225	167
4	0	100	207	153

For each bird chemically analysed, the weight of each chemical component of the body was converted to natural logs (*ln*) from which the allometric relationship between each component (Y) and *ln* body protein weight (X) was determined.

2.2.4 Design and statistical analysis

A factorial design was used, with four protein levels, three strains and two sexes. Two replications of each treatment combination were used. Data were subjected to statistical analysis using Analysis of Variance for calculation of treatment means, and Simple Linear Regression with Groups (Genstat, 2002) for an analysis of parallelism. In this analysis the first model to be fitted is a simple linear regression, ignoring the different levels of each factor (groups). Next the model is extended to include a different constant term for each group, giving a set of parallel lines one for each group. Then, the final model is fitted, which has both a different constant and a different regression coefficient for each group. If the analysis shows that different intercepts are needed but not different slopes the analysis is re-run to remove the interaction between the explanatory variate and the groups factor. Similarly, if different intercepts are not needed, just the explanatory variate is fitted. These analyses were conducted for each of the body parts in turn, first using each factor independently, and thereafter the interactions between factors were investigated.

2.3 RESULTS

2.3.1 Body weight, food intake and feed conversion efficiency

The final body weight, food intake to six weeks and feed conversion efficiency (FCE, g gain/kg feed) for each strain, sex and balanced protein level are given in Table 2.4. There were significant differences ($P<0.01$) in each of these variables between strains, sexes and dietary protein levels, but only one significant ($P<0.01$) interaction, this being between feed and sex in food intake to six weeks. In all cases the males were heavier, and consumed more feed than the females. The Ross 788 strain was lighter and less efficient than the Cobb strain. In most cases the Cobb strain was also heavier than the Ross 308, and in all cases, more efficient. Only at the lowest feed protein content did body weight decrease significantly below those on the other feed treatments. As can be seen from the feed intakes on the four dietary protein levels, food intake increased as protein content decreased, but fell significantly on the lowest protein feed. This was reflected in the low FCE's on low protein diets.

2.3.1.1 Breast meat yield

The mean weights of breast meat, excluding skin and bone, at weekly intervals for males and females of the three strains and on the four dietary protein levels, are given in Table 2.5. All main effects were significantly different ($P<0.01$) as were the interactions between strain and age ($P<0.05$), sex and age ($P<0.01$) and feed and age ($P<0.01$) as well as between sex and feed ($P<0.05$). None of the three- or four-way interactions were significant. The Cobb strain generally exhibited heavier breast meat weights than the other two strains, males had heavier body weights than females, and the body weights of birds on the lowest protein feeds were lower than on the other feeds.

When the weights of breast meat were regressed against the corresponding weight of body protein, the resultant allometric coefficients (constant term and slope) (Table 2.9) were not significantly different between strains and sexes, but significant differences ($P<0.05$) existed between dietary protein levels. These relationships are illustrated in Fig. 2.1 for the three strains, and Fig. 2.2 for the four feed protein levels. A significant ($P<0.05$) linear trend was observed in constant terms with protein level, the value decreasing from -1.2136 to -1.5359 while the corresponding regression coefficients increased from 1.1908 to 1.2374.

Table 2.4 Mean body weight, food intake and food conversion efficiency of males and females of three strains of broiler fed four levels of balanced protein to six weeks of age

	Protein 1		Protein 2		Protein 3		Protein 4	
Sex	F	M	F	M	F	M	F	M
				Body weight (g) at six weeks				
Ross 308	2400	2847	2465	2876	2425	2826	2296	2636
Ross 788	2387	2792	2427	2849	2401	2739	2319	2533
Cobb	2508	2866	2506	3031	2486	2902	2366	2614
RMS				2792				
				Food intake (g) to six weeks				
Ross 308	4201	4731	4379	4976	4386	4868	4181	4862
Ross 788	4081	4776	4278	4945	4252	4660	4171	4586
Cobb	4046	4525	4159	4647	4128	4651	4074	4473
RMS				206191				
				Food conversion efficiency (g gain/kg feed)				
Ross 308	572	602	563	578	553	581	550	542
Ross 788	585	585	568	577	565	588	557	553
Cobb	620	633	603	652	602	625	581	585
RMS[1]				197				

[1] Residual mean square

Whereas the analysis of variance found no significant interaction between strain and sex, when the allometric equations were compared this interaction was significant (Table 2.10.1) with Ross 308 and 788 males differing (P<0.01) from Cobb males and all females. The constant term for Ross males was 0.19 higher, and the regression coefficient 0.5 lower than for the Cobb males. Interactions also occurred between strain and feed (Table 2.11.1) and between sex and feed (Table 2.12.1). These can be best viewed in Table 2.13.1 where the three way interactions between strain, sex and dietary protein levels are given. No significant trends were evident, but Ross 308 appeared to differ in more cases than the Ross 788 from the Cobb strain.

2.3.1.2 Thigh Weight

Mean thigh weights at weekly intervals for all treatment groups are given in Table 2.6. These weights include bone and skin and represent the mean of the two thighs from each bird. Significant differences were evident in thigh weight between sexes ($P<0.01$), feeds ($P<0.05$), feed x age ($P<0.01$) and sex x age ($P<0.01$), but of greater importance was that the same coefficient (1.0355) could be used to represent all strains and sexes when the allometric relationship between thigh weight and body protein weight was determined (Table 2.9). However, as with breast meat yield, there was a linear decrease in constant term and corresponding increase in regression coefficient with feed protein level. These relationships are illustrated in Fig. 2.3 for the three strains, and Fig. 2.4 for the four feed protein levels.

Some significant two- and three-way interactions were evident, these being between strain and feed (Table 2.11.2), sex and feed (Table 2.12.2) and strain x sex x feed (Table 2.13.2). The most common deviations from the reference group (Cobb males on high protein feed) were those birds on the lower protein feeds.

2.3.1.3 Drum Weight

As with thigh weight, the mean weights of the drum given in Table 2.7 include bone and skin, and represent the mean of the two drums from each bird. The main effects of sex and feed were significantly different ($P<0.01$) as were the interactions between sex x age and feed x age ($P<0.01$).

The constant terms and allometric coefficients differed significantly ($P<0.01$) for the Ross 308 strain compared with the other two strains (Table 2.9), but only the constant terms differed significantly ($P<0.01$) between sexes and feed protein contents.

The Ross 308 was mainly responsible for the significant ($P<0.01$) two-way interactions between strain x sex (Table 2.10.2) and strain x feed (Table 2.11.3). No significant three-way interaction existed for drum weight.

Table 2.5 Mean weights (g) of breast meat of females and males of three strains of broiler fed four levels of balanced protein to six weeks of age

		Breast weight - Females											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content[1]											
(weeks)	RMS[2]	1	2	3	4	1	2	3	4	1	2	3	4
1	3.1	15	16	16	12	14	13	13	9	13	14	10	10
2	50	59	54	52	45	49	49	44	33	49	50	47	41
3	309	126	141	121	108	116	112	103	100	128	97	93	97
4	879	233	167	211	203	192	202	191	169	183	177	187	154
5	2539	268	317	226	224	290	231	264	223	252	263	197	179
6	4088	398	385	391	312	337	360	328	283	294	354	361	308

[1]Protein levels are described in Table 2.3

[2]Residual mean square

Table 2.5 Continued

		Breast weight - Males											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content											
(weeks)	RMS	1	2	3	4	1	2	3	4	1	2	3	4
1	3.1	15	16	12	11	15	15	12	8	13	14	11	11
2	50	65	51	58	49	57	51	47	36	54	49	42	32
3	309	155	157	144	124	118	126	93	96	125	123	103	112
4	879	250	233	227	202	215	168	193	155	216	182	198	147
5	2539	283	342	306	288	288	294	261	197	264	335	254	194
6	4088	436	430	474	309	371	433	413	286	405	450	385	286

Table 2.6 Mean thigh weight (g) of females and males of three strains of broiler fed four levels of balanced protein to six weeks of age

		Thigh weight - Females											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content[1]											
(weeks)	RMS[2]	1	2	3	4	1	2	3	4	1	2	3	4
1	1.3	8	10	9	8	9	8	8	8	9	8	7	7
2	11.7	25	27	23	24	23	24	22	20	23	23	20	23
3	50	52	51	52	51	49	51	47	47	50	49	36	45
4	100	75	59	72	77	76	79	79	78	73	66	76	76
5	224	85	115	77	90	103	97	103	100	97	97	85	88
6	382	132	135	133	130	118	129	139	130	103	140	143	136

[1]Protein levels are described in Table 2.3

[2]Residual mean square

Table 2.6 Continued

		Thigh weight - Males											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content											
(weeks)	RMS	1	2	3	4	1	2	3	4	1	2	3	4
1	1.3	9	11	7	7	10	9	8	7	7	8	7	7
2	11.7	29	24	26	23	26	24	23	22	25	24	20	19
3	50	55	59	55	55	53	50	46	49	54	57	49	50
4	100	82	82	84	81	90	73	78	74	75	76	78	75
5	224	100	116	115	115	117	112	129	103	115	127	110	107
6	382	143	150	175	141	153	159	159	132	159	154	153	139

Table 2.7 Mean drum weights (g) of females and males of three strains of broiler fed four levels of balanced protein to six weeks of age

		Drum weight - Females											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content[1]											
(weeks)	RMS[2]	1	2	3	4	1	2	3	4	1	2	3	4
1	0.77	8	8	8	7	7	7	7	6	7	7	6	6
2	6	22	22	21	19	20	21	20	16	20	21	18	18
3	29	41	43	40	40	42	41	40	39	43	37	31	37
4	59	66	53	60	67	66	63	65	66	62	62	65	57
5	158	75	83	70	79	91	85	87	78	88	83	72	67
6	241	113	113	108	97	103	117	110	104	96	107	112	109

[1]Protein levels are described in Table 2.3

[2]Residual mean square

Table 2.7 Continued

		Drum weight - Males											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content											
(weeks)	RMS	1	2	3	4	1	2	3	4	1	2	3	4
1	0.77	8	8	6	7	7	8	7	6	6	7	6	7
2	6	26	21	24	19	22	21	20	18	22	20	19	16
3	29	46	49	50	43	47	47	38	42	50	46	41	44
4	59	75	72	74	70	75	69	70	63	75	67	69	64
5	158	88	100	94	94	109	103	102	83	98	116	92	90
6	241	119	120	137	112	132	138	138	117	136	145	137	118

Table 2.8 Mean wing weights (g) of females and males of three strains of broiler fed four levels of balanced protein to six weeks of age

		Wing weight - Females											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content[1]											
(weeks)	RMS[2]	1	2	3	4	1	2	3	4	1	2	3	4
1	0.6	6	7	6	5	6	6	6	6	6	6	6	5
2	5	19	20	19	18	19	18	17	15	18	19	17	17
3	20	38	37	36	35	38	36	34	33	37	37	29	32
4	37	54	43	51	51	52	55	57	55	54	52	54	54
5	71	59	65	58	63	74	67	72	63	66	65	66	55
6	121	93	85	85	80	79	92	89	80	78	98	93	92

[1]Protein levels are described in Table 2.3

[2]Residual mean square

Table 2.8 Continued

		Wing weight - Males											
		Cobb				Ross 308				Ross 788			
Age		Dietary protein content											
(weeks)	RMS	1	2	3	4	1	2	3	4	1	2	3	4
1	0.6	6	7	5	6	6	6	5	5	5	6	5	5
2	5	23	19	20	18	19	18	17	16	20	18	16	15
3	20	42	41	41	40	40	36	33	34	40	41	36	34
4	37	56	59	60	59	60	53	55	47	63	57	53	48
5	71	69	78	76	82	81	76	82	67	74	89	72	68
6	121	99	99	109	88	101	105	104	91	109	102	104	95

2.3.1.4 Wing weight

The mean weights of the wing of birds of both sexes, three strains and on the four dietary protein levels to six weeks of age are given in Table 2.8. As with drum weight, the main effects of sex and feed, and the interactions between sex x age and feed x age were significantly different ($P<0.01$) in the analysis of variance. A common allometric regression was appropriate for strain, sex and feed protein content (Table 2.9), but in all these cases the constant terms differed significantly ($P<0.01$). The constant terms for the four feed protein contents increased as the protein content decreased. No two- or three-way interactions were evident.

2.3.1.5 Liver, gut and remainder

The liver weight could be represented for all strains and sexes by a common constant term and allometric slope (Table 2.9), this slope being appropriate for the four feed protein levels also. However, the constant terms increased with decreasing feed protein contents, as with the remainder of the carcass after all parts had been removed (Table 2.9). A significant ($P<0.01$) interaction between strain x feed was evident (Table 2.11.4) with the Cobb strain on the lowest feed protein content having a different constant term to all other strain x feed combinations. Some significant three-way interactions between strain x feed x sex can be seen for liver and remainder in Tables 2.13.3 and 2.13.4.

Gut weight differed initially between strains, but the allometric lines converged as the birds grew (Table 2.9, *Group = Strain*). However, these were unaffected by feed or sex. All the row data and analysis of variance tables are given in Appendix Chapter 2 on the attached CD.

Table 2.9 Allometric coefficients relating component weight to body protein weight with sex, strain and feed as groups

Group= Strain

	Constant Term			Regression Coefficient			R^2
Strain	Ross 308	Cobb	Ross 788	Ross 308	Cobb	Ross 788	
Breast		-2.3785			1.4088		96.2
		± 0.0556			± 0.0114		
Thigh	-1.2538	-1.3022	-1.2795		1.0355		99.1
		± 0.0203			± 0.0040		
Drum	-1.3862	-1.3195	-1.3195	1.0301	1.0073	1.0073	99.3
		± 0.0292			± 0.0060		
Wing	-1.7213	-1.7562	-1.7056		1.0544		98.5
		± 0.0273			± 0.0053		
Liver		-1.046			0.8719		95.2
		± 0.0392			± 0.0080		
Gut	1.0439	1.4064	1.1626	0.6856	0.5996	0.6665	93.3
		± 0.0602			± 0.0124		
Remain	1.4199	1.3949	1.4215		0.9061		99.4
		± 0.0147			± 0.0029		

Table 2.9 Continued

Group= Sex

Sex	Constant F	Constant M	Reg Coeff. F	Reg Coeff. M	R^2
Breast	-2.3785		1.4088		96.2
	± 0.0556		± 0.0114		
Thigh	-1.2774		1.0353		99.1
	± 0.0195		± 0.0040		
Drum	-1.3417	-1.3135	1.0145		99.3
	± 0.0175		± 0.0035		
Wing	-1.7149	-1.7403	1.0544		98.5
	± 0.0266		± 0.0053		
Liver	-1.046		0.8719		95.2
	± 0.0392		± 0.0080		
Gut	1.1996		0.6515		92.9
	± 0.0359		± 0.0074		
Remain	1.413		0.9059		99.4
	± 0.0141		± 0.0029		

Group= Feed

Protein	Constant Term 260	Constant Term 240	Constant Term 223	Constant Term 207	Regression Coefficient 260	Regression Coefficient 240	Regression Coefficient 223	Regression Coefficient 207	R^2
Breast	-1.2136	-0.1261	-1.3169	-1.5359	1.1908	1.2000	1.2048	1.2374	98.9
		± 0.0548				± 0.0108			
Thigh	-1.1829	-1.1575	-1.2741	-1.321	1.0104	1.0099	1.0328	1.0562	98.9
		± 0.0463				± 0.0092			
Drum	-1.3949	-1.3869	-1.3873	-1.3523		1.0248			99.1
		± 0.0223				± 0.0042			
Wing	-1.4188	-1.4167	-1.4061	-1.3747		0.9926			98.8
		± 0.0247				± 0.0046			
Liver	-0.5175	-0.4912	-0.4640	-0.4121		0.7619			96.1
		± 0.0345				± 0.0065			
Gut		1.1996				0.6515			92.9
		± 0.0359				± 0.0074			
Remain	1.3029	1.3233	1.3399	1.3978		0.9200			99.4
		± 0.0165				± 0.0031			

Table 2.10 Parameters for the two-way interactions between strain and sex compared with the reference level: Cobb-M (Cobb males, used as reference)

Table 2.10.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(549)[1]	t pr.[2]
Constant	-1.4283	0.0661	-21.6	<.001
*ln*_protein	1.2361	0.0131	94.37	<.001
308-M	0.1964	0.0901	2.18	0.03
788-M	0.1821	0.0904	2.01	0.044
*ln*_protein. 308-M	-0.0581	0.0178	-3.25	0.001
*ln*_protein. 788-M	-0.0536	0.0179	-3.00	0.003

[1] n= 549

[2] pr.= Probability of an estimate

Table 2.10.2 Estimates of parameters for drum

Parameter	estimate	s.e.	t(549)	t pr.
Constant	-1.3223	0.0515	-25.68	<.001
*ln*_protein	1.01	0.0102	98.99	<.001
308-F	-0.1638	0.0726	-2.26	0.024
*ln*_protein. 308-F	0.0379	0.0145	2.61	0.009

Table 2.11 Parameters for the two-way interactions between strain and feed compared with the reference level: Cobb-1 (Cobb strain on feed with highest protein, used as reference)

Table 2.11.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(537)	t pr.
Constant	-1.3409	0.0914	-14.66	<.001
*ln*_protein	1.2248	0.018	68.11	<.001
308-4[1]	-0.421	0.124	-3.41	<.001
788-1	0.163	0.127	1.28	0.2
*ln*_protein. 308-1	-0.056	0.0249	-2.25	0.025
*ln*_protein. 308-2	-0.0609	0.0248	-2.46	0.014
*ln*_protein. 308-4	0.0536	0.0247	2.17	0.031
*ln*_protein. 788-1	-0.0451	0.0251	-1.8	0.073
*ln*_protein. 788-2	-0.0297	0.0247	-1.2	0.23

[1] Ross 308, protein level 4

Table 2.11.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(537)	t pr.
Constant	-1.2534	0.0819	-15.31	<.001
*ln*_protein	1.0182	0.0161	63.25	<.001
*ln*_protein. 788-4[1]	0.0637	0.0223	2.85	0.005

[1] Ross 788, protein level 4

Table 2.11.3 Estimates of parameters for drum

Parameter	estimate	s.e.	t(537)	t pr.
Constant	-1.2968	0.0748	-17.33	<.001
*ln*_protein	0.9995	0.0147	67.94	<.001
308-1	-0.237	0.104	-2.29	0.023
*ln*_protein. 308-1	0.0535	0.0204	2.62	0.009
*ln*_protein. 308-4	0.0444	0.0202	2.2	0.029
*ln*_protein. 788-4	0.0472	0.0204	2.31	0.021

Table 2.11.4 Estimates of parameters for liver

Parameter	estimate	s.e.	t(537)	t pr.
Constant	-0.487	0.125	-3.9	<.001
*ln*_protein	0.7522	0.0246	30.62	<.001
Cobb-4	0.436	0.175	2.49	0.013

Table 2.12 Parameters for the two-way interactions between sex and feed compared with the reference level: M1 (Males on feed with highest protein, used as reference)

Table 2.12.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(545)	t pr.
Constant	-1.0968	0.0742	-14.78	<.001
*ln*_protein	1.1636	0.0145	80.47	<.001
1-F[1]	-0.268	0.108	-2.49	0.013
3-F	-0.295	0.106	-2.79	0.005
4-F	-0.47	0.104	-4.5	<.001
4-M	-0.408	0.104	-3.92	<.001
*ln*_protein. 1-F	0.0623	0.0213	2.93	0.004
*ln*_protein. 3-F	0.0605	0.021	2.89	0.004
*ln*_protein. 4-F	0.0857	0.0208	4.12	<.001
*ln*_protein. 4-M	0.0615	0.0208	2.96	0.003

[1] Protein level 1, Female

Table 2.12.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(545)	t pr.
Constant	-1.1768	0.0651	-18.08	<.001
*ln*_protein	1.0098	0.0127	79.62	<.001
*ln*_protein. 3-F	0.0303	0.0184	1.65	0.1
*ln*_protein. 4-F	0.0489	0.0182	2.68	0.008
*ln*_protein. 4-M	0.044	0.0182	2.42	0.016

Table 2.13 Parameters for the three-way interactions between strain, sex and feed compared with the reference level: CM1 (Cobb males on feed with highest protein content, used as reference)

Table 2.13.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(513)	t pr.
Constant	-1.376	0.127	-10.84	<.001
*ln*_protein	1.2302	0.0248	49.51	<.001
308-F-4	-0.422	0.172	-2.45	0.015
308-M-1	0.414	0.175	2.37	0.018
308-M-2	0.429	0.171	2.51	0.012
308-M-4	-0.353	0.17	-2.07	0.039
788-M-1	0.373	0.172	2.17	0.031
*ln*_protein. 308-M-1	-0.0997	0.0341	-2.93	0.004
*ln*_protein. 308-M-2	-0.0968	0.0335	-2.89	0.004
*ln*_protein. 788-M-1	-0.0891	0.0335	-2.66	0.008

Table 2.13.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(513)	t pr.
Constant	-1.145	0.117	-9.82	<.001
*ln*_protein	0.9986	0.0228	43.74	<.001
788-F-4	-0.338	0.16	-2.11	0.035
*ln*_protein. 308-F-3	0.0814	0.0328	2.48	0.013
*ln*_protein. 788-F-4	0.0873	0.0319	2.73	0.006
*ln*_protein. 788-M-4	0.0793	0.0315	2.52	0.012

Table 2.13.3 Estimates of parameters for liver

Parameter	estimate	s.e.	t(513)	t pr.
Constant	-0.604	0.176	-3.43	<.001
*ln*_protein	0.7746	0.0345	22.48	<.001
Cobb-F-4	0.723	0.245	2.95	0.003
*ln*_protein. Cobb-F-4	-0.1213	0.0487	-2.49	0.013

Table 2.13.4 Estimates of parameters for remainder

Parameter	estimate	s.e.	t(513)	t pr.
Constant	1.407	0.104	13.57	<.001
*ln*_protein	0.8936	0.0203	44.03	<.001
*ln*_protein. 308-F-3	0.0618	0.0292	2.12	0.035
*ln*_protein. 788-M-4	0.0592	0.028	2.11	0.035

2.3.2 Body lipid content

The body lipid content of the birds, at weekly intervals, for the three strains, two sexes and four dietary protein levels, are given in Table 2.14. Body protein contents are not presented here, as they did not vary as much as did the lipid contents. Body water contents are also not presented, as these are highly correlated (negatively) with body lipid content. Females always contained more lipid than males, the mean contents over all treatments at six weeks being 155 and 139 g/kg respectively. Body lipid content was negatively related to dietary protein content, the mean values over all treatments at six weeks being 118, 145, 157 and 168 g lipid/kg body weight. There was no difference at six weeks in the lipid content of the three strains.

2.4 DISCUSSION

The objective of the trial was not to compare the performance of the different strains and sexes on the four dietary protein levels, but to ascertain whether the allometric relationships between the main physical parts of the body and body protein were influenced by these three factors. To do this it was important to ensure differences in growth rates between strains, sexes and dietary protein levels, especially at the end of the growth period, when comparisons of breast meat yield, for example, are usually made. To this end the treatments were successful, as significant differences occurred in all variables measured. All of the physical parts measured exhibited differences in weight at six weeks, confirming earlier reports that these parts appear to differ between strains, sexes and dietary protein levels (Chambers, 1990; Barton, 1994; Le Bihan-Duval *et al*., 1999; Berri *et al*., 2001; Kemp *et al.,* 2005).

While these physical parts do differ at an age depending on the genotype and feed protein level used, the more important question, from a modelling point of view, is whether these differences can be predicted in a growth model. The most pragmatic method for simulating the effects of various inputs on the growth of the physical parts of a broiler is to predict the growth of feather-free body protein and make use of the allometric relationships that exist between the physical parts and body protein to predict the weights of these parts at different stages of growth (Emmans, 1981; Emmans and Fisher, 1986; Emmans, 1987). The question that is raised by this approach is whether different allometric equations need to be used for each strain, sex and dietary protein level: if this were the case then this approach would be unwieldy and unlikely to be of value in the modelling process. The results of this experiment suggest that this approach is valid, given the very few instances where a common allometric regression would not account for all observations throughout the growth period.

Whereas the regressions were in some cases statistically different between dietary protein levels, the differences in the weights predicted by these regressions for a broiler with a body protein content of 500 g (approximately 3 kg body weight) were relatively insignificant: at the highest and lowest dietary protein contents the predicted breast meat weights using the equations in Table 9 (Group = Feed) were 533 and 518 g respectively, 15 g higher for birds reared on the high protein feed, which conforms with the views of Bartov and Plavnik (1998) and Dozier *et al.* (2006). However, the predicted thigh weight was 29 g heavier on the low protein feed (177 vs. 205 g), predicted drum weight was 7 g heavier on the low protein feed (156 vs. 163), and the wing weight was 5 g heavier on the low protein feed (125 vs. 130 g) respectively.

For the most part, those cases that differ significantly from the common regression may be explained in terms of variable amounts of lipid that are deposited in the body parts depending on the genotype and the level of dietary protein fed. Emmans and Fisher (1986) make the point that it is the growth of the fat-free body (or more correctly, the body with a normal amount of lipid) that may be simulated, and then with the addition of excess lipid growth and feathers (and some allowance for gut fill) the growth of the whole body and its gross chemical composition can be predicted.

Low protein feeds will cause birds to become fatter (Table 2.14; Gous *et al.*, 1990), and the fat is likely to be deposited to different extents in the various parts of the body. The rate of lipid deposition in the various tissues may also vary between strains. Thus the amount of lipid deposited in breast meat, for example, on low protein feeds is unlikely to be the same as in the thigh or drum of each of the strains used here. Hence, the effect of dietary protein content on the allometric relationship between breast meat weight and body protein weight would be expected to differ when comparisons are made at different dietary protein levels. Such comparisons have not been published. Hakansson *et al.* (1978) conducted a trial that could have produced the necessary data, but reported the effect of three levels of dietary energy on the combined weight of edible meat and skin rather than on individual portions. In this trial, the issue concerning lipid deposition in different tissues was not addressed, but it would be informative if such information were to be made available, as a correction could then be made for each of the body parts depending on how much excess lipid had been deposited in the whole body.

An interesting observation (Fig. 2.1) was that all day-old breast meat weights fell below the fitted regression. This same tendency for the breast muscles of day-old broiler chickens to be underdeveloped in relation to body protein content was reported by Lindsay (1992) and by Gous *et al.* (1996). The reason for this is not known but it emphasises that more information is needed about the control of the development of this important tissue and the way it is influenced by environmental factors, especially nutrition. It has been shown that dietary protein and amino acid levels in the very early stages of growth influence breast meat yield in later life in a way which is not predicted from responses at the early stages (Kemp *et al.*, 2005). The recruitment of satellite cells has been suggested as a possible mechanism for these observations (Aviagen, 2008) but this hypothesis is far from proven.

The results of this trial suggest that the genotypes used here have not been changed substantially by genetic selection, nor are the differences between the sexes of such a magnitude that separate allometric equations for each of the physical parts of the broiler need to be defined for each genotype or sex. Differences in the predicted weights of the physical parts when broilers are fed differing dietary protein levels may be explained on the basis that lipid is deposited to different extents in each of the parts, and it would be useful to know to what extent these rates differ, so that the weights of the parts can be adjusted by the predicted amount of lipid deposited in them on feeds differing in protein content.

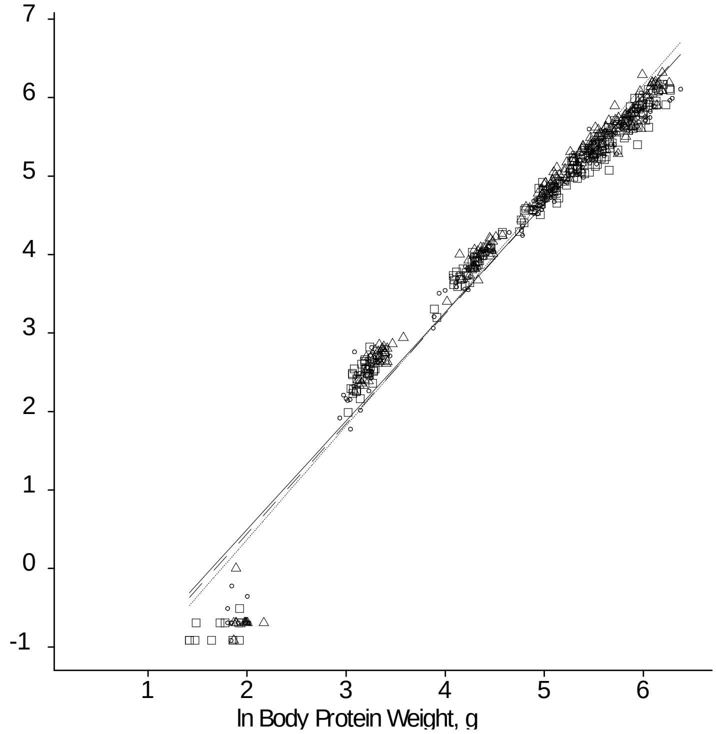

Figure 2.1 Observed and fitted allometric relationship ln between breast meat yield and ln body protein weight for the three strains used in the trial. Cobb, … Δ; Ross 308, - - - ○; Ross 788, ___ □

Table 2.14 Mean body lipid contents (g/kg), from one to six weeks of age, of three strains and two sexes of broilers fed four levels of dietary protein

	Body lipid, g/kg, females											
	Cobb				Ross 388				Ross 788			
Age (Week)	Dietary protein content[1]											
	1	2	3	4	1	2	3	4	1	2	3	4
1	60	63	85	80	55	59	74	84	49	65	61	63
2	79	95	110	130	70	84	110	100	72	91	100	130
3	86	110	120	130	100	89	120	130	98	100	110	130
4	100	110	140	180	100	130	130	160	120	120	130	160
5	100	120	150	180	100	140	150	160	120	140	120	160
6	120	150	170	170	120	160	180	170	120	160	160	180

[1]Protein levels described in Table 2.3

Table 2.14 Continued

	Body lipid, g/kg, males											
	Cobb				Ross 388				Ross 788			
Age (Week)	Dietary protein content[1]											
	1	2	3	4	1	2	3	4	1	2	3	4
1	45	56	64	76	53	59	76	74	43	63	68	110
2	67	88	92	110	80	80	85	100	66	77	90	100
3	77	94	110	120	85	80	99	120	82	98	100	120
4	96	110	150	130	110	110	110	140	89	100	110	150
5	99	130	140	170	110	120	130	160	110	110	130	150
6	110	140	140	160	120	120	140	170	120	130	160	170

[1]Protein levels described in Table 2.3

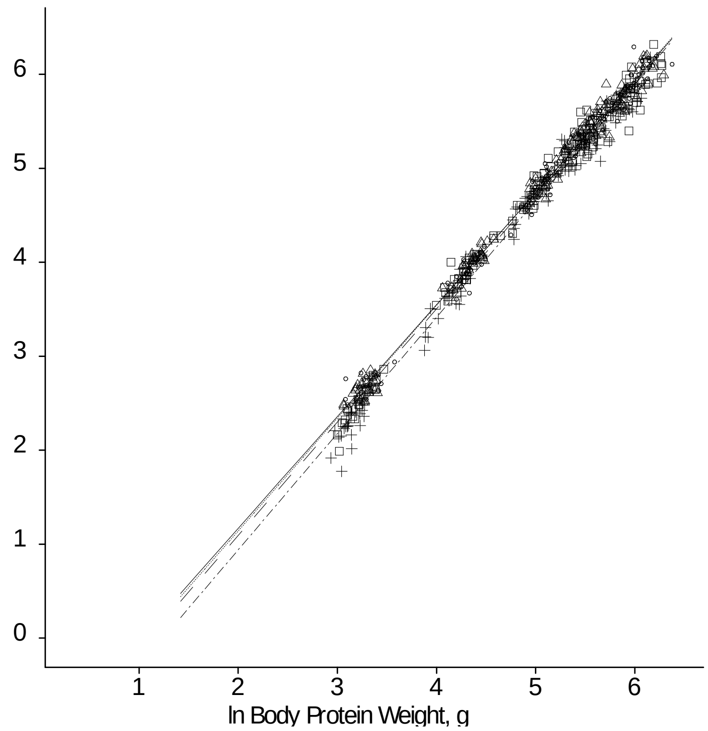

Figure 2.2 Observed and fitted allometric relationship between ln breast meat yield and ln body protein weight for the four levels of balanced protein feed used in the trial. Feed 1___ Δ; Feed 2…. ○; Feed 3 ----, □; Feed 4 -.-.-, +

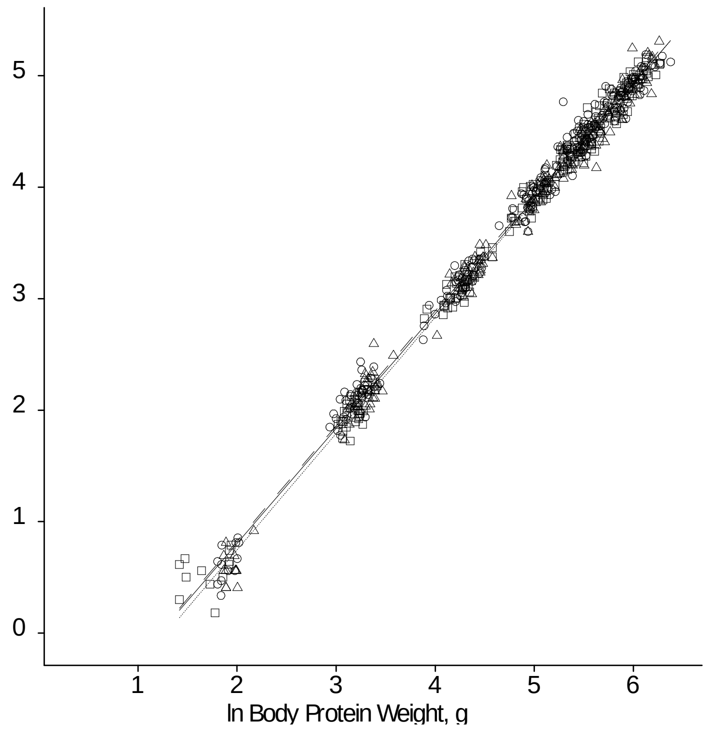

Figure 2.3 Observed and fitted allometric relationship between ln thigh weight and ln body protein weight for the three strains used in the trial. Cobb, … Δ; Ross 308, - - - ○; Ross 788, ___ □

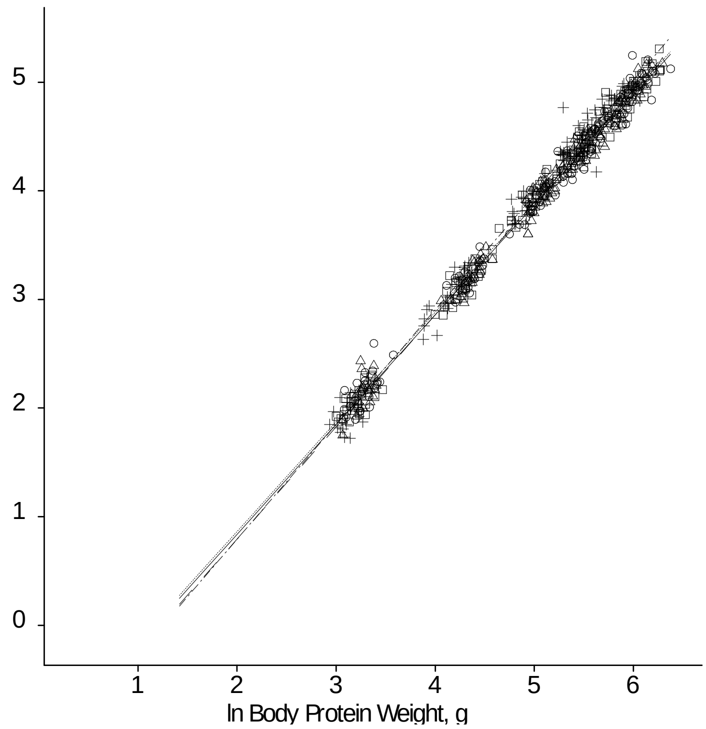

Figure 2.4 Observed and fitted allometric relationship between ln thigh weight and ln body protein weight for the four levels of balanced protein feed used in the trial. Feed1___ Δ; Feed2…. ○; Feed3 ----, □; Feed4 -.-.-, +

2.5 CONCLUSIONS

In spite of reports in the literature suggesting that the yield of physical parts of broiler genotypes has been altered by selection, when the weights of these parts are regressed allometrically on body protein weight it is clear that the differences are of little economic significance when compared at the same body protein weight. The largest differences were apparent between broilers fed differing amounts of dietary protein, and even these were of a low magnitude.

CHAPTER 3

EFFECT OF DIETARY PROTEIN ON PERFORMANCE OF FOUR BROILER STRAINS AND ON THE ALLOMETRIC RELATIONSHIPS BETWEEN CARCASS PORTIONS AND BODY PROTEIN

3.1 INTRODUCTION

Literature suggests that the physical parts of broilers appear to differ between strains, sexes and dietary protein levels (Chambers, 1990; Barton, 1994; Le Bihan-Duval *et al*., 1999; Berri *et al*., 2001; Kemp *et al.,* 2005). This raised the question, addressed in a previous paper (Danisman and Gous, 2008), whether geneticists had, by selection, managed to produce broilers that yielded larger amounts of breast meat, or thigh, drum or wing portions, than unselected strains when compared at a common body protein content. The results of that trial indicated that the allometric relationships between the physical parts of the carcass and body protein were largely unaffected by strain and sex, and only marginally by the dietary protein content. This paper reports the results of a subsequent trial in which these relationships were again measured using a fourth broiler strain in addition to the three used previously, but with only three dietary protein levels being used, and with the experiment being terminated when the birds were 12 weeks of age as opposed to 6 weeks in the previous trial, to determine whether the relationships in the previous chapter hold for longer periods and over different strains.

3.2 MATERIALS AND METHODS

The four commercial broiler strains used in this trial were Ross 788, Ross 308, Cobb 500 and Hybro. Day-old chicks from these strains were obtained from local hatcheries, sexed, and placed in 48 pens with 64 chickens being placed initially per pen, and with males and females being reared separately, i.e. six pens of males and six of females of each of four strains were used in the trial. The trial was terminated when the birds were 12 weeks of age.

3.2.1 Feeds and feeding procedure

The same basal feeds used in the previous trial were again used here, with the starter feeds (crumbled) being used to three weeks and the grower feeds (pelleted) for the remainder of the trial. In each phase these two feeds were used alone and blended (50:50) to produce three levels of protein. Sampling and feeding procedures were the same as those used in the previous trial.

3.2.2 Sampling for portioning and carcass analysis

The same sampling procedures were used as in the previous trial, except that birds were sampled at weekly intervals to six weeks and then at eight, ten and 12 weeks. The weights and natural log (ln) of each chemical component of the body were calculated from which the allometric relationships between the components (Y) and ln body protein weight (X) were determined.

3.2.3 Design and statistical analysis

A factorial design was used, with four strains, two sexes and three protein levels. Two replications of each treatment combination were used. Data were subjected to statistical analysis using Analysis of Variance for calculation of treatment means, and Simple Linear Regression with Groups procedures of Genstat (2002).

3.3 RESULTS

Mean body weight at six and 12 weeks, cumulative food intake to six and 12 weeks and the corresponding feed conversion efficiencies (FCE) at these ages for each strain, sex and balanced protein level are given in Table 3.1. Body weight did not differ between strains at these ages, but were significantly ($P<0.01$) different between sexes at both ages and between dietary protein levels at six weeks only. The amount of food consumed differed significantly ($P<0.01$) between strains and sexes at both ages, but between protein levels only at six weeks, as was the case with FCE.

3.3.1 Breast meat yield

The mean breast weights of the four strains, two sexes and three dietary protein levels, at weekly intervals, are given in Table 3.2. Highly significant ($P<0.01$) differences were evident between strains, sexes and feed protein levels, and significant interactions between these factors and age were evident also. At 12 weeks the Hybro and Cobb strains had significantly higher ($P<0.01$) breast meat weights (1265 and 1205 g) than the two Ross strains (1032 and 995 g). The highest breast meat weight (1211 g) resulted from feeding the high protein feed vs. 1058 and 1105 g for the two lower protein feeds ($P<0.01$). Males had consistently heavier breast meat yields than females.

The allometric coefficients relating component weight to body protein weight for the main effects of strain, sex and feed treatment are given in Table 3.6, the relationships being illustrated for the four strains in Fig. 3.1 and for the three feed protein levels in Fig. 3.3. Day-old breast meat yield fell below the regression line for all observations (Fig. 3.1), so a second regression analysis was performed with these data points excluded. As a result, for the main effect of Strain the R^2 value increased from 96.9 to 99.3, but a common regression coefficient was no longer appropriate, and three constant terms and regression coefficients were needed, with the two Ross strains sharing a common regression. This is illustrated in Fig. 3.2. The weight of breast meat for the two sexes, however, was best described by a common regression once the day-old weights were excluded. The slopes of the regressions describing the effect of dietary protein level on breast weight became steeper, and constant terms decreased, as the protein content decreased.

Significant three-way interactions were evident in some instances (Table 3.7.1), with the common regression (using Cobb males on high protein feed as the reference) being modified for each strain and sex under varying circumstances. For example, the constant term for Ross 788 females on feed 2 varied significantly ($P<0.05$) from the reference (-1.6822 vs. -1.4322), whereas both the constant term ($P<0.001$) and the regression coefficient ($P<0.001$) for Cobb females on feed protein level 2 varied significantly from the reference.

Table 3.1 Mean body weight (kg), cumulative food intake (kg) and food conversion efficiency (g food/kg gain) of males and females of four strains of broiler fed three levels of balanced protein at six and 12 weeks of age

	Week 6						Week 12					
	Protein 1		Protein 2		Protein 3		Protein 1		Protein 2		Protein 3	
	F	M	F	M	F	M	F	M	F	M	F	M
						Body weight						
Ross 308	2.51	2.96	2.32	2.75	2.39	2.59	4.70	6.36	4.82	6.25	4.92	5.95
Ross 788	2.43	2.83	2.32	2.68	2.30	2.68	4.96	6.28	4.94	6.11	5.12	6.38
Cobb	2.50	2.96	2.41	2.73	2.37	2.75	5.06	6.02	4.84	5.90	5.01	6.22
Hybro	2.40	2.94	2.37	2.82	2.31	2.67	5.18	6.66	5.09	6.37	5.01	6.36
RMS[1] (23 df)	5.72						86.8					
						Cumulative food intake						
Ross 308	4.32	4.97	4.13	4.71	4.32	4.60	13.0	16.5	13.6	16.0	13.6	15.2
Ross 788	4.29	4.83	4.02	4.62	4.17	4.65	14.1	16.1	13.5	16.2	13.3	15.8
Cobb	4.10	4.59	3.92	4.45	4.03	4.69	12.4	14.0	12.1	14.3	12.4	14.5
Hybro	3.80	4.60	3.90	4.46	3.83	4.38	12.0	14.2	12.7	14.2	11.8	14.1
RMS (23 df)	10.0						392					

Table 3.1 Continued

	Food conversion efficiency											
Ross 308	571	587	552	576	545	545	359	384	353	387	360	388
Ross 788	557	578	568	572	542	542	350	386	362	377	382	401
Cobb	599	635	604	603	577	577	403	426	397	409	402	425
Hybro	621	629	596	621	593	593	428	464	396	447	422	448
RMS (23 df)			259						200			

[1] Residual mean square

Table 3.2 Weekly mean breast meat weights (g) of females and males of four strains of broiler fed three levels of balanced protein to 12 weeks of age

		Breast meat weight - Females											
		Cobb			Ross 308			Ross 788			Hybro		
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	3.3	13	13	10	15	13	12	15	14	12	16	14	11
2	55	56	54	53	55	38	42	50	42	38	53	49	42
3	351	124	96	93	108	103	81	110	97	75	106	102	97
4	1012	196	212	205	217	182	187	220	151	167	236	194	196
5	1629	370	336	317	273	268	235	296	290	259	355	284	302
6	4705	477	360	461	410	430	343	407	348	333	367	424	338
8	9551	729	730	660	640	567	575	592	561	510	687	703	594
10	22597	888	919	830	655	830	782	729	759	745	929	921	818
12	33832	1234	1057	1046	859	901	893	905	850	884	1241	1051	1134

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

Table 3.2 Continued

		Breast meat weight - Males											
		Cobb			Ross 308			Ross 788			Hybro		
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	3.3	14	12	8.0	16	13	12	14	12	9.0	15	14	11
2	55	50	53	43	55	47	28	57	50	36	51	50	43
3	351	137	118	104	110	101	68	111	80	64	123	114	79
4	1012	272	254	180	244	199	200	243	212	194	267	240	165
5	1629	401	353	301	282	307	255	330	270	264	356	375	294
6	4705	385	525	386	497	376	339	452	417	291	555	464	415
8	9551	865	841	816	736	685	619	789	742	717	834	883	747
10	22597	985	1068	1075	879	982	959	964	930	890	1175	1115	1106
12	33832	1436	1212	1262	1335	1041	1162	1175	1074	1084	1506	1281	1376

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

Table 3.3 Mean thigh weight (g) of females and males of four strains of broiler fed three levels of balanced protein to 12 weeks of age

		Thigh weight - Females											
		Cobb			Ross 308			Ross 788			Hybro		
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	1.3	8.4	6.9	7.3	8.4	7.4	7.3	9.0	8.4	7.8	8.5	8.1	6.8
2	11	25	25	17	25	20	22	24	20	20	23	22	19
3	42	46	38	37	39	40	40	43	42	37	39	39	43
4	117	79	77	81	79	73	74	81	61	73	76	71	74
5	105	106	103	102	100	97	102	106	105	103	101	97	101
6	605	150	85	153	152	141	118	141	125	126	119	129	116
8	568	193	205	189	212	174	196	192	183	178	186	195	165
10	1106	222	230	236	194	227	250	217	248	222	229	248	222
12	2210	318	295	309	241	281	289	272	276	275	314	279	308

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

Table 3.3 Continued

		Thigh weight - Males											
		Cobb			Ross 308			Ross 788			Hybro		
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	1.3	8.4	6.1	6.1	9.1	7.9	7.7	7.5	7.3	6.2	8.1	8.2	7.8
2	11	22	23	21	25	22	16	24	22	21	21	21	20
3	42	52	47	43	43	42	34	45	36	33	49	44	37
4	117	96	89	75	97	72	83	87	81	82	88	90	70
5	105	129	113	110	102	119	103	123	100	112	109	123	108
6	605	120	153	132	185	139	144	153	155	126	170	144	152
8	568	243	259	245	239	228	234	242	242	252	233	228	233
10	1106	283	287	324	266	307	323	285	297	322	319	322	348
12	2210	403	392	398	352	392	415	349	340	371	406	344	362

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

Table 3.4 Mean drum weights (g) of females and males of four strains of broiler fed three levels of balanced protein to 12 weeks of age

		Drum weight - Females											
		Cobb			Ross 308			Ross 788			Hybro		
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	0.71	7.0	6.4	5.6	6.8	6.5	6.6	7.7	7.3	6.7	7.2	7.3	6.4
2	7.9	21	18	15	21	14	18	20	18	17	20	19	18
3	27	40	33	31	36	37	34	39	38	32	35	34	36
4	80	65	59	61	68	60	60	67	54	62	64	55	60
5	79	91	84	81	86	86	83	89	90	88	83	81	82
6	340	116	70	111	117	125	102	117	105	105	100	106	91
8	374	147	156	154	160	146	163	154	160	154	149	156	139
10	782	191	188	178	167	202	210	179	214	183	188	202	185
12	1012	215	219	205	203	225	238	221	237	226	221	240	237

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

Table 3.4 Continued

		Drum weight - Males											
			Cobb			Ross 308			Ross 788			Hybro	
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	0.71	6.8	5.5	5.4	8.0	6.5	6.7	6.7	6.4	5.7	6.8	7.0	6.2
2	7.9	19	19	19	22	19	15	22	19	16	21	19	18
3	27	46	40	40	38	40	30	42	32	29	44	39	32
4	80	80	78	59	85	67	74	81	72	66	77	75	57
5	79	106	94	89	99	98	91	108	88	96	98	104	94
6	340	110	138	100	159	130	121	138	135	113	137	129	125
8	374	220	209	195	222	206	203	223	219	228	198	197	205
10	782	235	247	241	254	277	289	276	275	269	274	263	260
12	1012	237	295	292	319	262	337	309	283	334	329	292	308

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

Table 3.5 Mean wing weights (g) of females and males of four strains of broiler fed three levels of balanced protein to 12 weeks of age

		Wing weight - Females											
		Cobb			Ross 308			Ross 788			Hybro		
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	0.38	6.2	5.3	5.0	6.4	5.9	5.5	6.6	6.4	5.3	6.6	6.2	5.4
2	5	18	17	13	18	15	17	16	16	16	19	17	15
3	22	34	29	28	30	30	30	34	31	28	32	32	31
4	55	53	56	52	56	53	51	56	43	49	57	56	52
5	57	72	71	67	66	65	67	74	73	69	72	70	72
6	199	98	60	97	97	85	79	95	85	83	79	89	79
8	103	130	126	126	128	111	127	119	124	121	119	127	115
10	237	151	142	139	133	145	153	142	152	145	148	154	161
12	448	184	172	171	142	168	179	165	179	185	184	177	176

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

Table 3.5 Continued

		Wing weight - Males											
		Cobb			Ross 308			Ross 788			Hybro		
Age		Dietary protein level[1]											
(weeks)	RMS[2]	1	2	3	1	2	3	1	2	3	1	2	3
1	0.38	5.9	5.1	4.7	6.0	5.6	5.7	5.5	5.6	4.8	6.2	6.3	5.5
2	5	16	18	16	19	15	12	18	16	14	16	17	16
3	22	39	35	30	32	31	25	34	29	26	38	35	30
4	55	67	64	53	62	52	57	61	61	57	68	64	52
5	57	68	75	73	73	78	70	78	79	74	77	90	75
6	199	85	102	84	116	94	92	102	102	90	115	90	96
8	103	169	168	136	155	143	149	157	162	155	153	154	156
10	237	185	186	181	180	197	195	199	185	192	203	190	200
12	448	252	215	221	228	231	234	223	212	240	239	234	216

[1] Protein levels 1 (high) and 3 (low) are described in Table 2.3. Protein level 2, 1:1 blend of these feeds

[2]Residual mean square

3.3.2 Thigh weight

Thigh weights at weekly intervals for the three factors are given in Table 3.3. Differences between strains, sexes and dietary protein levels were again evident. The Cobb strain produced heavier thighs at 12 weeks ($P<0.01$) than the other strains (Table 3.3), as did the lowest dietary protein level (681 g). The two higher levels of protein produced weights of 663 and 649 g, which did not differ significantly one from the other. Males yielded significantly ($P<0.01$) heavier thighs than females.

The relationship between thigh weight and body protein weight is illustrated in Fig. 3.4 for the four strains, and in Fig. 3.5 for the three feed protein levels used in the trial. Separate constant terms and slopes for each of the four strains, for the two sexes and for the three feed protein levels fitted the data better than common regressions for the main effects of Strain, Sex and Feed (Table 3.6). But when three-way interactions were tested, only the regression coefficient for Cobb females on the lowest protein level differed significantly ($P<0.05$) from the reference combination (Table 3.7.2).

3.3.3 Drum weight

The drums of the Hybro and Ross 788 strains (Table 3.4) were heavier ($P<0.05$) than those from the other two strains, and dietary protein level 2 in this case produced heavier drums ($P<0.01$) than the others. Mean weights, at weekly intervals, are given in the table.

As with thigh weights, the constant terms and slopes for each strain and sex differed sufficiently to warrant separate regressions for these main effects (Table 3.6), whereas with feed protein level, although three constant terms were necessary, a single regression coefficient (1.0329) described the relationship adequately. For the three-way interactions (Table 3.7.3), two combinations (Cobb females and Hybro males both on feed 1) resulted in significantly ($P<0.05$) different slopes from the common slope, although the constant terms were the same in all cases.

3.3.4 Wing weight

Although wing weights (Table 3.5) differed between strains, sexes and dietary protein levels during the growing period, no differences were evident between strains or protein levels at 12 weeks. There were, however, differences between males and females ($P<0.01$) that became evident after three weeks of age.

The main effect of Strain had no effect on the allometric regression between wing weight and body protein weight (Table 3.6), whereas there were small but significant differences between the sexes in the constant term used to describe this relationship. Although a common slope was appropriate for the main effect of Feed, the constant terms decreased significantly with feed protein content, resulting in three parallel lines describing the relationship between wing weight and body protein weight. The regression for Hybro males on the lowest protein feed differed significantly ($P<0.01$) from all the other three-way combinations (Table 3.7.4), the constant term being higher (0.291) but the slope less steep (-0.0507). All the row data and analysis of variance tables are given in Appendix Chapter 3 on the attached CD.

3.3.5 Body lipid content

The body lipid content of the sampled birds, at six and 12 weeks, for the four strains, two sexes and three dietary protein levels, are given in Table 3.8. Females contained more lipid ($P<0.01$) than males at both ages (131 vs. 119 and 178 vs. 130 g lipid/kg at six and 12 weeks respectively). Body lipid content was negatively related ($P<0.01$) to dietary protein content at six weeks, the mean values over all treatments being 107, 124 and 145 g lipid/kg body weight. By 12 weeks the differences had disappeared and overall mean lipid contents were the same on the three feed protein levels. There were no differences at either age in the lipid content of the four strains.

Table 3.6 Allometric coefficients relating component weight to body protein weight for the main effects of strain, sex and feed protein level

Main effect = Strain

	Constant Term				Regression Coefficient				R^2
	R 308	R 788	Cobb	Hybro	R 308	R 788	Cobb	Hybro	
Breast	-2.5297	-2.5285	-2.4339	-2.434	1.4151				96.9
	± 0.0509				± 0.0085				
-day old	-1.4388	-1.4388	-1.6135	-1.4388	1.2300	1.2300	1.2770	1.2524	99.3
Breast	± 0.0390				± 0.0070				
Thigh	-1.4376	-1.39	-1.4289	-1.3507	1.0591	1.0482	1.0577	1.0398	99.6
	± 0.0258				± 0.00473				
Drum	-1.534	-1.474	-1.481	-1.4375	1.0495	1.0386	1.0304	1.0252	99.6
	± 0.0249				± 0.0046				
Wing	-1.6617				1.0280				99.2
	± 0.0170				± 0.0031				

Main effect = Sex

	Constant term		Regression Coefficient		R^2
	F	M	F	M	
Breast	-2.597	-2.405	1.4461	1.392	97.0
	± 0.0675		± 0.0125		
-day old	-1.4655		1.248		99.3
Breast	± 0.0207		± 0.0037		
Thigh	-1.4455	-1.366	1.6074	1.0433	99.6
	± 0.0186		± 0.00345		
Drum	-1.4902	-1.4671	1.0354		99.6
	± 0.013		± 0.0023		
Wing	-1.6531	-1.674	1.0284		99.2
	± 0.0173		± 0.0031		

Table 3.6 Continued

Main effect = Feed

	Constant term			Regression Coefficient			R^2
	260	233	207	260	233	207	
Breast	-1.388	-1.4309 ± 0.0371	-1.632	1.2311	1.2373 ± 0.0066	1.2659	99.3
Thigh	-1.3356	-1.4057 ± 0.0281	-1.3941	1.0353	1.0510 ± 0.0028	1.0556	99.4
Drum	-1.4725	-1.4982 ± 0.0169	-1.4497		1.0329 ± 0.0027		99.4
Wing	-1.4171	-1.3978 ± 0.0166	1.3899		0.9837 ± 0.0028		99.3

Table 3.7 Parameters for the three-way interactions between strain, sex and feed protein level compared with the reference level: CM1[1]

Table 3.7.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(782)	t pr.
Constant	-1.4322	0.084	-17.02	<.001
ln_protein	1.2404	0.015	84.57	<.001
7-F-2[2]	-0.25	0.120	-2.07	0.038
C-F-2	-0.498	0.118	-4.22	<.001
C-M-2[3]	-0.254	0.115	-2.2	0.028
H-F-2	-0.236	0.120	-1.97	0.049
ln_protein. 3-M-1[4]	-0.0418	0.021	-2	0.046
ln_protein. 3-M-3	-0.0432	0.021	-2.09	0.037
ln_protein. 7-M-1	-0.0466	0.021	-2.26	0.024
ln_protein. 7-M-3	-0.0411	0.021	-2.01	0.045
ln_protein. C-F-1	0.0537	0.022	2.5	0.013
ln_protein. C-F-2	0.0992	0.021	4.73	<.001
ln_protein. C-F-3	0.0572	0.022	2.64	0.008
ln_protein. H-F-1	0.0458	0.023	2.02	0.044
ln_protein. H-F-2	0.0499	0.021	2.34	0.02

[1] Cobb Males on Feed Protein level 1 (high)

[2] Ross 788 x female x feed protein 2

[3] Cobb x male x feed protein 2

[4] ln protein . Ross 308 x male x feed protein 1

Table 3.7.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(782)	t pr.
Constant	-1.3160	0.0765	-17.2	<.001
ln_protein	1.0338	0.0133	77.51	<.001
ln_protein. C-F-3	0.0398	0.0197	2.02	0.043

Table 3.7.3 Estimates of parameters for drum

Parameter	estimate	s.e.	t(782)	t pr.
Constant	-1.5175	0.0750	-20.22	<.001
ln_protein	1.0418	0.0131	79.65	<.001
ln_protein. C-F-1	-0.0460	0.0192	-2.4	0.017
ln_protein. H-M-1	-0.0358	0.0182	-1.97	0.05

Table 3.7.4 Estimates of parameters for wing

Parameter	estimate	s.e.	t(782)	t pr.
Constant	-1.5019	0.0767	-19.58	<.001
ln_protein	1.0025	0.0134	74.97	<.001
H-M-3	0.2910	0.1080	2.7	0.007
ln_protein. H-M-3	-0.0507	0.0189	-2.68	0.007

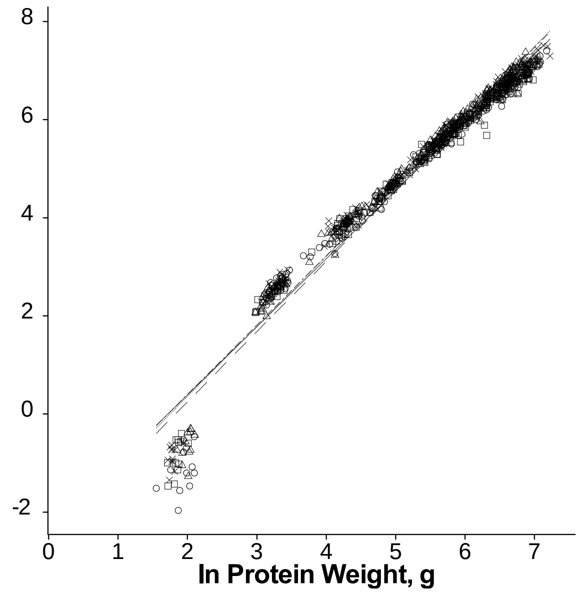

Figure 3.1 Allometric relationship between ln breast meat yield and ln body protein weight for the four strains used in the trial. Cobb, … Δ; Ross 308, - - - ○; Ross 788, ___ □; Hybro, _._._. x

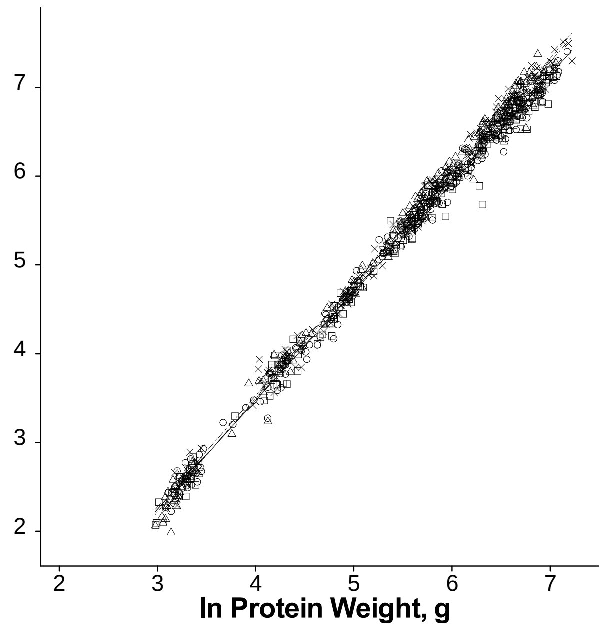

Figure 3.2 Allometric relationship between ln breast meat yield and ln body protein weight for the four strains with day-old observations removed. Cobb, … Δ; Ross 308, - - - ○; Ross 788, ___ □; Hybro, _._. x

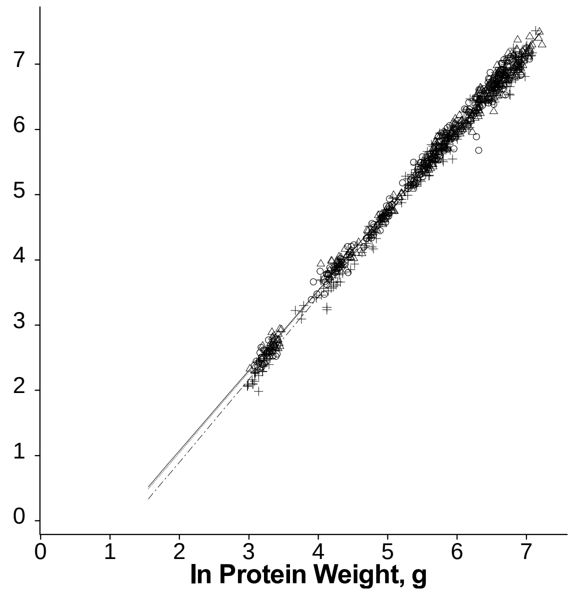

Figure 3.3 Allometric relationship between ln breast meat yield and ln body protein weight for the three levels of balanced protein feed used in the trial. Feed1___ Δ; Feed2…. ○; Feed3 -.-.-, +

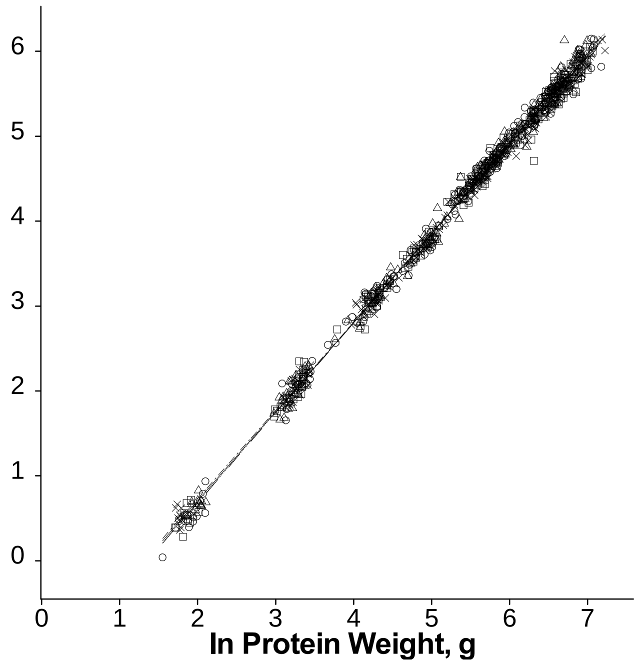

Figure 3.4 Allometric relationship between ln thigh weight and ln body protein weight for the four strains used in the trial. Cobb, … Δ; Ross 308, - - - ○; Ross 788, ___ □; Hybro, _._._. x

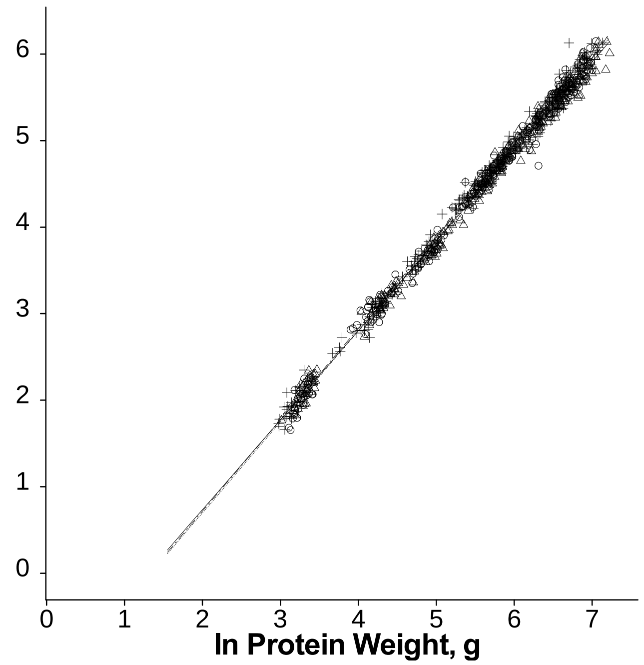

Figure 3.5 Allometric relationship between ln thigh weight and ln body protein weight for the three levels of balanced protein feed used in the trial.

Feed1___ Δ; Feed2…. ○; Feed3 -.-.-, +

Table 3.8 Body lipid content of broilers at 6 and 12 weeks of age for four strains, two sexes and three dietary protein levels

		Body lipid content (g/kg)					
			6 weeks			12 weeks	
Strain	Sex	Protein 1	Protein 2	Protein 3	Protein 1	Protein 2	Protein 3
Ross 308	M	99	129	143	128	156	125
	F	111	126	145	151	178	181
Ross788	M	101	111	130	125	111	136
	F	112	132	151	157	232	154
Cobb	M	109	108	134	134	124	151
	F	128	130	162	177	161	204
Hybro	M	90	129	143	106	123	144
	F	106	125	152	189	194	157
RMS (613 df) = 42.5							

3.4 DISCUSSION

In this trial the birds were reared to 12 weeks in order to make use of a wider range of component weights than was the case in the previous trial. As with the previous trial, wide differences in body weights, food intakes and feed conversion efficiencies were noted between the treatments, this resulting in widely different body and carcass portion weights at the various sampling times. As noted by previous researchers (Chambers, 1990; Barton, 1994; Le Bihan-Duval *et al*., 1999; Berri *et al*., 2001; Kemp *et al.,* 2005), highly significant differences in component weights are often observed between strains, sexes and feed protein levels. Such differences are justifiably used to demonstrate the value of certain strains or feeding treatments, but as Danisman and Gous (2008) have shown, such differences are more likely to be the result of comparisons being made at different body protein weights, as the allometric relationships between the various parts and body protein vary little between strains, sexes and feed protein levels. Statistical differences do exist in these allometric relationships, but these are small compared with the differences that are reported when comparisons are made at an age, for example.

A possible explanation for these differences in allometric relationships may be due to differences in the amount of lipid that is deposited in the various parts, which is in part dependent on the feed protein level offered, and on the maximum amount of lipid that can be deposited in each tissue, which is dependent on the genotype. This is a deviation from the original hypothesis tested here, that no differences exist in these allometric relationships between strains, sexes and feed protein levels and needs to be tested. Certainly, Emmans and Fisher (1986) recognised that this may be a problem, and suggested the need for adding an additional amount to the predicted weight of each part depending on the amount of body lipid above the normal that was deposited in that tissue. There are no published data on the amount of lipid that is stored in each of the body parts; Hakansson *et al*. (1978) measured the amount of lipid that was deposited in all edible meat on feeds varying in ME content, but this is of little value as it is likely that more lipid would be deposited in the thigh than the breast muscle, for example. It is necessary for these numbers to be measured before progress can be made in using allometric relationships to predict the weights of the various body parts.

As in the previous trial, the breast meat weights of day-old chickens all fell below the fitted regression indicating that this is a consistent occurrence, given that it has been observed also by Lindsay (1992) and by Gous *et al*. (1996). It would be interesting to ascertain whether in ovo (Uni and Ferket, 2004) or early feeding (Noy *et al*. 2001; Sklan *et al*. 2002) would raise these day-old weights to the predicted levels, and whether there is potential to increase breast meat yield still further by addressing this issue.

Feeds in this and the previous trial were changed at three weeks, so the finisher feeds in this trial were fed for nine weeks. The lowest protein feeds after three weeks would have been severely limiting in amino acids initially, but would have become less so as the capacity to consume feed increased in these broilers over time, so by the end of the test period broilers on these feeds would no longer have had to overconsume energy in order to obtain the desired amount of protein, and consequently the rate of body lipid deposition would have been reduced. This is confirmed by the lipid contents of the sampled birds at 12 weeks (Table 3.8), which are no longer significantly different between feed protein levels. In retrospect, the feed protein contents should have been reduced further at about eight weeks of age to ensure bigger differences in the body lipid contents of birds on the various treatments: instead, birds on that feed treatment were given the opportunity of reducing the excess amount of body lipid that had previously been deposited, thereby resulting in similar body lipid contents in birds on all feed treatments. When measuring the effect of feed protein content on body lipid deposition rates in different body parts, it would be necessary to reduce the feed protein contents at regular intervals in order to ensure that the low protein feeds remain limiting in protein throughout the trial.

3.5 CONCLUSIONS

The results from this trial confirmed those in the previous trial, namely, that breast meat at day old appears to be at an earlier degree of maturity than the rest of the body parts measured in the trial; that the allometric relationships between the various body parts and body protein are very similar between strains, sexes and feed protein contents even though there are statistical differences between these factors, thus disproving the original hypothesis that no differences exist between these factors; and that the differences observed may possibly be explained by differences in the amount of lipid that is deposited in the various tissues as a result of the feed protein levels being fed. As there are no published data on the amount of lipid that is stored in the various body parts when birds are given feeds differing in the amount of protein, such a trial would need to be conducted before a modified version of the hypothesis can be tested.

CHAPTER 4

A SYNTHESIS OF TWO TRIALS ON THE EFFECTS OF DIETARY PROTEIN CONTENT ON THE ALLOMETRIC RELATIONSHIPS BETWEEN CARCASS PORTIONS AND BODY PROTEIN IN FOUR BROILER STRAINS

4.1 INTRODUCTION

The two experiments reported in the two previous chapters were conducted to determine the effects of dietary protein content on the allometric relationships between carcass portions and body protein in four broiler strains used currently in South Africa. The general conclusions in each chapter were similar, namely, that these allometric relationships appeared to be similar in all strains and in both sexes, and that the small differences, mainly in the constant terms in these equations, may have been the result of differential amounts of carcass lipid being deposited in these tissues in response to the dietary protein content being fed.

An analysis of both data sets combined would determine the extent to which these results could be universally applicable, this being of greater benefit than the individual trial results. This chapter reports the results of this analysis.

4.2 MATERIALS AND METHODS

Data from the trials reported in Chapters 2 and 3 were combined to determine whether the allometric relationships were common to both trials. Levels of factors common to the two trials were given the same code (dummy variables); thus three of the strains used were common to both trials, both sexes were represented in each trial, and protein levels 1 and 4 in Trial 1 were the same as levels 1 and 3 in Trial 2. Levels 2 and 3 in Trial 1 differed from level 2 in Trial 2, so each was allocated a different code in the analysis. In order to test whether the responses differed between trials, each trial was allocated a code.

The combined data, excluding day-old weights, were analysed by regression using GenStat (2002) as before, using trial, strain, sex and feed protein content as groups. The main effects of these factors on the allometric equations were first determined, after which the two- and three-way interactions between factors were analysed. In testing these interactions a reference combination was used against which the other combinations were tested. In cases where strains were involved, the Cobb strain was used as the reference; males were used as the reference sex; and the highest feed protein level was used as the reference feed.

4.3 RESULTS

Allometric coefficients relating component weight to body protein weight with the main effects of trial, strain, sex and feed as groups are given in Table 4.1. The constant terms and slopes for breast and thigh weights differed significantly between trials, between strains and between sexes, but these were similar for all but the lowest feed protein content. The allometric regression for drum weight differed less between trials, strains and sexes, but was similar to that of the thigh regarding the effect of feed protein content. The equations for wing weight were the same in both trials, for all strains and sexes, and between feed protein contents. Equations for liver, gut and remainder differed to different extents between levels of each factor.

Table 4.1 Allometric coefficients relating component weight to body protein weight with trial, strain, sex and feed as groups

Group= Trial

Component	Constant term		Regression Coeff.		R^2
	Trial 1	Trial 2	Trial 1	Trial 2	
Breast	-1.3451	-1.4912	1.2108	1.2460	99.2
	± 0.0279		± 0.0059		
Thigh	-1.226	-1.3763	1.0266	1.0468	99.2
	± 0.0224		± 0.0045		
Drum	-1.3755	-1.4617	1.0238		99.3
	± 0.0212		± 0.0042		
Wing	-1.4000		0.9918		99.2
	± 0.0220		± 0.0044		
Liver	-0.4646		0.7610	0.7322	95.4
	± 0.0398		± 0.0080		
Gut	1.4272	0.6709	0.6073	0.7485	93.6
	± 0.0450		± 0.0090		
Remainder	1.3614	1.1951	0.9152	0.9255	99.2
	± 0.0202		± 0.0040		

Group= Sex

Component	Constant term		Regression Coeff.		R^2
	Male	Female	Male	Female	
Breast	-1.3900	-1.5702	1.2195	1.2647	99.2
	± 0.0218				
Thigh	-1.2655	-1.3372	1.0287	1.0438	99.2
	± 0.0184		± 0.0034		
Drum	-1.3841		1.0237		99.3
	± 0.0172		± 0.0032		
Wing	-1.3766		0.9808		99.1
	± 0.0180		± 0.0033		
Liver	-0.4048		0.7405		95.2
	± 0.01326		± 0.006		
Gut	1.0297	0.8626	0.6849	0.7173	92.9
	± 0.0384		± 0.0071		
Remainder	1.3553		0.9043		98.9
	± 0.0189		± 0.0035		

Table 4.1 Continued

Group= Strain

Component	Constant term				Regression coefficient				R^2
	R 308	R 788	Cobb	Hybro	R 308	R 788	Cobb	Hybro	
Breast	-1.4216	-1.3753	-1.5449		1.2243	1.2137	1.2632		99.3
		± 0.0293				± 0.0055			
Thigh	-1.284		-1.311		1.0279		1.0414		99.2
		± 0.0253				± 0.0047			
Drum		-1.3774			1.0352	1.0320	1.0151		99.3
		± 0.0234				± 0.0044			
Wing		-1.3818				0.9812			99.1
		± 0.0250				± 0.0047			
Liver	-0.4674		-0.2943		0.7531		0.7214		95.2
		± 0.0451				± 0.0084			
Gut	0.8617	0.8292	1.2049	0.8153	0.7235	0.7330	0.6418	0.7131	93.4
		± 0.0512				± 0.0096			
Remainder		1.3389		1.2257		0.9143			99
		± 0.0255				± 0.0048			

Table 4.1 Continued

Group= Feed

Component	Constant term.					Regression coefficient					R^2
	260	240	233	223	207	260	240	233	223	207	
Breast		-1.3584			-1.6343			1.2240		1.2637	99.2
			± 0.0299					± 0.0055			
Thigh	-1.2772		-1.4057	-1.2772		1.0262		1.0510	1.0262	1.0477	99.3
			± 0.0242					±0.0044			
Drum	-1.4120		-1.4982	-1.4120		1.0239		1.0383	1.0239		99.3
			± 0.0234					± 0.0043			
Wing			-1.3935					0.9819			99.2
			± 0.0224					± 0.0045			
Liver			-0.3945				0.7342		0.7722	0.7342	95.4
			± 0.0044					± 0.0080			
Gut	0.8700	1.4890	0.6416	1.4330	0.8700	0.7157	0.5955	0.7545	0.6073	0.7157	93.2
			± 0.0512					± 0.0094			
Remainder	1.2913		1.1783	1.2913		0.9086		0.9271	0.9086		99.1
			± 0.0234					± 0.0043			

In Table 4.2 those components showing significant two-way interactions between strain and sex are given separately for each component. There were no two way interactions for wing, so the analysis for this part is not included in the Table. Many significant interactions were found especially for breast meat, whilst for the other parts there were few significant interactions (Tables 4.2.1 to 4.2.5).

Table 4.2 Estimates of parameters describing the allometric relationships between six body parts and body protein showing significant deviations from the reference two-way combination of factors strain and sex (Cobb-Male)

Table 4.2.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(1375)	t pr.
Constant	-1.4739	0.0384	-38.36	<.001
ln_protein	1.2454	0.0071	175.1	<.001
308-M[1]	0.1442	0.0536	2.69	0.007
788-M[1]	0.1503	0.0534	2.81	0.005
COBB-F[1]	-0.1630	0.0558	-2.92	0.004
HYBRO-F	-0.1446	0.0686	-2.11	0.035
ln_protein. 308-M	-0.0448	0.0099	-4.51	<.001
ln_protein. 788-M	-0.0462	0.0099	-4.67	<.001
ln_protein. COBB-F	0.0396	0.0104	3.8	<.001
ln_protein. HYBRO-F	0.0397	0.0125	3.16	0.002

[1]M= Male, F= Female, 308= Ross 308, 788= Ross 788

Table 4.2.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(1375)	t pr.
Constant	-1.3197	0.0349	-37.79	<.001
ln_protein	1.0387	0.0065	160.67	<.001
308-M[1]	0.1324	0.0487	2.72	0.007
ln_protein. 308-M	-0.0210	0.0090	-2.32	0.02

[1]M= Male, 308= Ross 308

Table 4.2.3 Estimates of parameters for drum

Parameter	estimate	s.e.	t(1375)	t pr.
Constant	-1.3944	0.0319	-43.65	<.001
ln_protein	1.0210	0.0059	172.68	<.001
308-F[1]	-0.1105	0.0463	-2.39	0.017
ln_protein. 308-F	0.0250	0.0087	2.87	0.004
ln_protein. 788-M[1]	0.0140	0.0082	1.7	0.09

[1]M= Male, F= Female, 308= Ross 308, 788= Ross 788

Table 4.2.4 Estimates of parameters for liver

Parameter	estimate	s.e.	t(1375)	t pr.
Constant	-0.3577	0.0623	-5.74	<.001
ln_protein	0.7356	0.0115	63.82	<.001
308-M[1]	-0.1824	0.0869	-2.1	0.036

[1]M= Male, 308= Ross 308

Table 4.2.5 Estimates of parameters for remainder

Parameter	estimate	s.e.	t(1375)	t pr.
Constant	1.3574	0.0353	38.44	<.001
ln_protein	0.9028	0.0065	138.13	<.001
HYBRO-F[1]	-0.1835	0.0631	-2.91	0.004
ln_protein. HYBRO-F	0.0242	0.0115	2.1	0.036

[1] F= Female

Significant two-way interactions between strain and feed are given separately in Table 4.3 for six of the body parts measured. Again there was no two way interaction for wing weight. The greatest number of significant deviations from the reference combination occurred with breast and drum weights (Tables 4.3.1 to 4.3.5).

Table 4.3 Estimates of parameters describing the allometric relationships between six body parts and body protein showing significant deviations from the reference two-way combination of factors strain and feed (Cobb-260 g protein/kg)

Table 4.3.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(1355)	t pr.
Constant	-1.4788	0.0524	-28.2	<.001
ln_protein	1.2532	0.0096	130.4	<.001
308-1[1]	0.2022	0.0743	2.72	0.007
308-2	0.3780	0.1010	3.75	<.001
308-4	-0.1669	0.0716	-2.33	0.02
788-1	0.2090	0.0736	2.84	0.005
788-2	0.2320	0.1010	2.31	0.021
COBB-4	-0.2163	0.0722	-2.99	0.003
ln_protein. 308-1	-0.0516	0.0136	-3.79	<.001
ln_protein. 308-2	-0.0893	0.0196	-4.55	<.001
ln_protein. 308-3	-0.0532	0.0196	-2.72	0.007
ln_protein. 788-1	-0.0505	0.0135	-3.73	<.001
ln_protein. 788-2	-0.0582	0.0195	-2.98	0.003
ln_protein. 788-3	-0.0651	0.0189	-3.44	<.001
ln_protein. 788-5	-0.0370	0.0153	-2.42	0.016
ln_protein. COBB-4	0.0341	0.0134	2.55	0.011

[1] 308= Ross 308, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg

Table 4.3.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(1355)	t pr.
Constant	-1.3125	0.0455	-28.87	<.001
ln_protein	1.0318	0.0083	123.85	<.001
308-2[1]	0.2536	0.0874	2.9	0.004
COBB-5[1]	-0.1925	0.0735	-2.62	0.009
ln_protein. 308-2	-0.0407	0.0170	-2.39	0.017
ln_protein. COBB-5	0.0375	0.0132	2.83	0.005

[1] 308= Ross 308, 2= 240, 5= 207 g protein/kg

Table 4.3.3 Estimates of parameters for drum

Parameter	estimate	s.e.	t(1355)	t pr.
Constant	-1.3719	0.0431	-31.81	<.001
ln_protein	1.0124	0.0079	128.08	<.001
308-1[1]	-0.1310	0.0611	-2.14	0.032
308-5[1]	-0.1579	0.0693	-2.28	0.023
788-5	-0.1422	0.0701	-2.03	0.043
COBB-5	-0.1868	0.0697	-2.68	0.007
ln_protein. 308-1	0.0306	0.0112	2.73	0.006
ln_protein. 308-4[1]	0.0272	0.0110	2.48	0.013
ln_protein. 308-5	0.0348	0.0125	2.78	0.006
ln_protein. 788-4	0.0289	0.0110	2.64	0.008
ln_protein. 788-5	0.0320	0.0126	2.54	0.011
ln_protein. COBB-5	0.0309	0.0126	2.46	0.014

[1] 308= Ross 308, 1= 260, 4= 223, 5= 207 g protein/kg

Table 4.3.4 Estimates of parameters for liver

Parameter	estimate	s.e.	t(1355)	t pr.
Constant	-0.3398	0.0831	-4.09	<.001
ln_protein	0.7264	0.0152	47.67	<.001
308-5[1]	-0.2810	0.1340	-2.1	0.036

[1] 308= Ross 308, 5= 207 g protein/kg

Table 4.3.5 Estimates of parameters for remainder

Parameter	estimate	s.e.	t(1355)	t pr.
Constant	1.3155	0.0435	30.26	<.001
ln_protein	0.9024	0.0080	113.25	<.001
308-5[1]	-0.1534	0.0699	-2.19	0.028
788-5	-0.1603	0.0706	-2.27	0.023
ln_protein. 308-5	0.0290	0.0126	2.3	0.022
ln_protein. 788-4	0.0249	0.0110	2.26	0.024
ln_protein. 788-5	0.0308	0.0127	2.42	0.016

[1] 308= Ross 308, 788= Ross 788, 4= 223, 5= 207 g protein/kg

Estimates of parameters showing significant deviations from the reference two-way combination of factors sex and feed, when describing the allometric relationships between six body parts and body protein are shown in Table 4.4. The regression describing wing weight in terms of body protein weight was the same for all combinations of sex and feed and is therefore not included in this Table. The regressions for breast, thigh and gut were influenced by a number of two-way interactions, whereas those for the drum, liver and remainder were influenced by only one or two combinations of sex and feed (Tables 4.4.1 to 4.4.5).

Table 4.5 contains estimates of the parameters describing the allometric relationships between the body parts measured in the two trials and any three-way combinations of strain, feed and sex that deviated significantly from the reference combination used in the statistical analysis. Significant deviations were found in all body parts measured, including wing, and the number of deviations for each part was considerable, especially for the breast, thigh and drum (Tables 4.5.1 to 4.5.6).

Table 4.4 Estimates of parameters describing the allometric relationships between six body parts and body protein showing significant deviations from the reference two-way combination of factors sex and feed (Male-260 g protein/kg)

Table 4.4.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(1371)	t pr.
Constant	-1.2747	0.0390	-32.71	<.001
ln_protein	1.2034	0.0070	171.8	<.001
1-F[1]	-0.2133	0.0572	-3.73	<.001
4-F	-0.4419	0.0553	-7.99	<.001
4-M	-0.3058	0.0537	-5.7	<.001
5-F	-0.3094	0.0639	-4.84	<.001
ln_protein. 1-F	0.0506	0.0105	4.83	<.001
ln_protein. 4-F	0.0832	0.0102	8.16	<.001
ln_protein. 4-M	0.0429	0.0098	4.38	<.001
ln_protein. 5-F	0.0682	0.0115	5.92	<.001

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.4.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(1371)	t pr.
Constant	-1.2508	0.0330	-37.86	<.001
ln_protein	1.0203	0.0059	171.81	<.001
2-M	0.1731	0.0696	2.49	0.013
5-F	-0.2090	0.0542	-3.86	<.001
5-M	-0.1152	0.0519	-2.22	0.027
ln_protein. 2-M	-0.0252	0.0134	-1.88	0.06
ln_protein. 4-F	0.0290	0.0086	3.35	<.001
ln_protein. 4-M	0.0261	0.0083	3.15	0.002
ln_protein. 5-F	0.0426	0.0098	4.37	<.001
ln_protein. 5-M	0.0218	0.0092	2.36	0.018

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.4.3 Estimates of parameters for drum

Parameter	estimate	s.e.	t(1371)	t pr.
Constant	-1.4018	0.0318	-44.07	<.001
ln_protein	1.02506	0.00572	179.27	<.001
5-F	-0.1431	0.0522	-2.74	0.006
ln_protein. 5-F	0.02141	0.0094	2.28	0.023

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.4.4 Estimates of parameters for liver

Parameter	estimate	s.e.	t(1371)	t pr.
Constant	-0.3959	0.0599	-6.61	<.001
ln_protein	0.7365	0.0108	68.4	<.001
2-M	-0.293	0.126	-2.32	0.021
ln_protein. 2-M	0.065	0.0242	2.68	0.007

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.4.5 Estimates of parameters for remainder

Parameter	estimate	s.e.	t(1371)	t pr.
Constant	1.3261	0.0321	41.34	<.001
ln_protein	0.9027	0.0058	156.54	<.001
5-F	-0.1879	0.0526	-3.57	<.001
ln_protein. 5-F	0.0318	0.0095	3.36	<.001
ln_protein. 5-M	0.0181	0.0090	2.03	0.043

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.5 Estimates of parameters describing the allometric relationships between body parts and body protein showing significant deviations from the reference three-way combination of factors strain, sex and feed (Cobb-Male-260 g protein/kg[1])

Table 4.5.1 Estimates of parameters for breast

Parameter	estimate	s.e.	t(1319)	t pr.
Constant	-1.4128	0.0687	-20.58	<.001
ln_protein	1.2371	0.0125	99.11	<.001
308-F-4[1]	-0.3019	0.0966	-3.13	0.002
308-M-1	0.2182	0.0969	2.25	0.024
308-M-2	0.4660	0.1300	3.58	<.001
788-F-2	0.3020	0.1350	2.24	0.025
788-F-4	-0.2117	0.0969	-2.19	0.029
788-M-1	0.2337	0.0956	2.44	0.015
COBB-F-4	-0.3727	0.0963	-3.87	<.001
COBB-F-5	-0.2620	0.1150	-2.27	0.023
COBB-M-4	-0.2134	0.0945	-2.26	0.024
HYBRO-F-4	-0.2560	0.1130	-2.27	0.024
ln_protein. 308-F-4	0.0419	0.0180	2.33	0.02
ln_protein. 308-M-1	-0.0577	0.0176	-3.28	0.001
ln_protein. 308-M-2	-0.1037	0.0250	-4.15	<.001
ln_protein. 308-M-3	-0.0691	0.0246	-2.81	0.005
ln_protein. 308-M-5	-0.0399	0.0197	-2.03	0.043
ln_protein. 788-F-2	-0.0675	0.0264	-2.56	0.011
ln_protein. 788-M-1	-0.0552	0.0174	-3.18	0.002
ln_protein. 788-M-3	-0.0622	0.0247	-2.52	0.012
ln_protein. COBB-F-4	0.0733	0.0179	4.1	<.001
ln_protein. COBB-F-5	0.0605	0.0208	2.9	0.004
ln_protein. HYBRO-F-1	0.0491	0.0220	2.23	0.026
ln_protein. HYBRO-F-4	0.0531	0.0205	2.59	0.01
ln_protein. HYBRO-F-5	0.0420	0.0208	2.02	0.044

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.5.2 Estimates of parameters for thigh

Parameter	estimate	s.e.	t(1319)	t pr.
Constant	-1.2704	0.0632	-20.11	<.001
ln_protein	1.0249	0.0115	89.25	<.001
308-M-2	0.3180	0.1190	2.66	0.008
788-F-5	-0.2230	0.1070	-2.07	0.038
COBB-F-5	-0.2460	0.1060	-2.32	0.021
COBB-M-2	0.2380	0.1270	1.88	0.06
COBB-M-5	-0.2330	0.1010	-2.31	0.021
HYBRO-F-1	-0.2290	0.1100	-2.08	0.038
ln_protein. 308-F-3	0.0552	0.0255	2.17	0.03
ln_protein. 308-M-2	-0.0553	0.0230	-2.41	0.016
ln_protein. 788-F-5	0.0439	0.0194	2.27	0.023
ln_protein. COBB-F-5	0.0487	0.0192	2.54	0.011
ln_protein. COBB-M-4	0.0327	0.0160	2.05	0.041
ln_protein. COBB-M-5	0.0419	0.0180	2.33	0.02

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.5.3 Estimates of parameters for drum

Parameter	estimate	s.e.	t(1319)	t pr.
Constant	-1.4480	0.0590	-24.55	<.001
ln_protein	1.0301	0.0107	96.06	<.001
308-F-5	-0.2085	0.0974	-2.14	0.032
308-M-2	0.2930	0.1120	2.63	0.009
COBB-F-1	0.1684	0.0850	1.98	0.048
COBB-F-3	0.2480	0.1210	2.05	0.041
ln_protein. 308-F-5	0.0384	0.0177	2.17	0.03
ln_protein. COBB-F-1	-0.0388	0.0156	-2.49	0.013
ln_protein. COBB-F-3	-0.0499	0.0237	-2.1	0.036

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.5.4 Estimates of parameters for wing

Parameter	estimate	s.e.	t(1319)	t pr.
Constant	-1.4390	0.0642	-22.43	<.001
ln_protein	0.9926	0.0117	85.1	<.001
788-F-3	0.2590	0.1210	2.13	0.033
COBB-M-4	0.1850	0.0883	2.1	0.036
HYBRO-M-5	0.2280	0.1040	2.2	0.028
ln_protein. COBB-M-4	-0.0332	0.0162	-2.05	0.041
ln_protein. HYBRO-M-5	-0.0408	0.0185	-2.21	0.027

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.5.5 Estimates of parameters for liver

Parameter	estimate	s.e.	t(1319)	t pr.
Constant	-0.4600	0.1160	-3.98	<.001
ln_protein	0.7557	0.0210	35.97	<.001
ln_protein. 788-F-5	-0.0709	0.0354	-2	0.046
ln_protein. 788-M-2	0.0852	0.0428	1.99	0.047
ln_protein. COBB-F-1	-0.0647	0.0305	-2.12	0.034

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

Table 4.5.6 Estimates of parameters for remainder

Parameter	estimate	s.e.	t(1319)	t pr.
Constant	1.3305	0.0605	21.98	<.001
ln_protein	0.9004	0.011	81.81	<.001
308-F-5	-0.2051	0.1	-2.05	0.04
788-F-5	-0.213	0.103	-2.07	0.039
HYBRO-F-1	-0.272	0.106	-2.57	0.01
ln_protein. 308-F-3	0.055	0.0244	2.26	0.024
ln_protein. 308-F-5	0.035	0.0181	1.93	0.054
ln_protein. 788-F-5	0.0428	0.0186	2.31	0.021
ln_protein. 788-M-4	0.0297	0.0151	1.97	0.049
ln_protein. HYBRO-F-1	0.0415	0.0194	2.14	0.033

[1]M= Male, F= Female, 1= 260, 2= 240, 3= 233, 4= 223, 5= 207 g protein/kg.

4.5 DISCUSSION

Significant differences were found between the two trials in the allometric equations describing the parts in terms of body protein weight. This could be the result of using a number of untrained technicians to dissect the broilers, resulting in incomplete removal of some parts from the body. It is well known that the yield of parts differs depending on the sampler and suggests that trained samplers should be used when conducting experiments of this nature. Nevertheless, differences, although statistically significant, were very small: for example, the thigh weights for body protein contents of 18, 90 and 450 g were predicted to be 6, 30 and 155 g for Trial 1 and 5, 28 and 151 g for Trial 2. Such differences are so small as to be of little consequence when modelling the weight of the thigh in response to changes in feeding or the environment. Consequently, it was felt that the two trials should be combined in order to conduct an analysis of a larger volume of data.

Apart from the prediction of the weight of the wing from body protein weight, which was unaffected by any of the factors applied in the two trials, all other body components were affected by these factors to a greater or lesser extent. In many instances there were many interactions, suggesting that the allometric relationships were altered significantly by most of the factors applied, making it almost impossible to interpret the results. For example, in Table 4.5.1 where the allometric relationship between breast meat and body protein weight was analysed, ten constant terms and 13 regression coefficients differed significantly from the reference combination of Cobb males on the highest level of dietary protein. With four breeds, two sexes and five feed protein levels in the two trials the maximum number of combinations is 40, so in the latter case more than half the combinations of factors differed significantly from the reference. The hypothesis that the allometric relationships are the same irrespective of strain sex and feed protein content is not corroborated by these results.

Where an hypothesis is not corroborated the hypothesis needs to be reviewed and changed. In the previous chapters of this thesis it was suggested that differences may result in the weights of the various components of the body when regressed against body protein if differential amounts of lipid are deposited in those parts depending on the strain, sex and feed protein content. This modification to the hypothesis was proposed by Emmans and Fisher (1986). In order to test this updated hypothesis it would be necessary to determine the extent to which lipid can be deposited in each of the tissues, and the range of deposition rates depending on the three factors included in these trials.

Consequently, no further attempt is made to discuss the results obtained here, as any such discussion is meaningless without knowing the lipid content of each of the parts included in the above analysis. Instead, a further trial was designed and conducted in which this issue was addressed, by analysing the various parts at different stages of growth for lipid content, and this is the subject of the following chapter.

4.6 CONCLUSIONS

The combined data refuted the hypothesis that the allometric relationship for each body part is the same irrespective of strain sex and feed protein content, requiring a modification to this hypothesis. As a result, the data were not extensively examined, and a further trial was planned to determine the amount of lipid that is deposited in the meat and skin of each of the commercially important parts of the broiler. The two trials synthesised in this Chapter were found to be inconsistent with regard to some of the measurements, suggesting that the samplers were insufficiently trained to cut up the carcasses consistently. This is a specialised task, and requires considerable practice to become consistent, a luxury that was not available here. Nevertheless, variation in the way that broilers are cut up is expected both within and between samplers and evisceration plants thus not invalidating the data.

CHAPTER 5

DETERMINING THE AMOUNT OF LIPID THAT CAN BE DEPOSITED IN SOME OF THE PHYSICAL PARTS OF BROILERS

5.1 INTRODUCTION

Two experiments, reported above, have been conducted to examine the allometric relationships between various component weights of broilers and their body protein weight. In a number of cases the constant terms differed between strains, sexes and feed protein levels used thus disproving the hypothesis that allometric relationships are common across these factors. It was suggested that these differences may be the result of variable rates of deposition of lipid into the muscles and skin of the various components, as a consequence of the feed protein content offered. Emmans and Fisher (1986) had foreseen this problem and addressed it by calculating the weights of parts on the basis of 'normal' growth, i.e. excluding any excess lipid that might have been deposited as a result of the bird having overconsumed energy. An alternative approach, which would be difficult to implement, would be to regress the protein weight, and not the total weight, of each component against body protein weight, which may well provide allometric equations that are common across strains, sexes and feed protein levels, but this approach would require the protein weight, once predicted, to be converted to a total weight for each body part. This approach would in any case require information about the amount of lipid that had been deposited in the tissue.

The approach suggested by Emmans and Fisher (1986) would appear to be the most efficient, given that the body protein content of the bird during the growing period may be accurately predicted, as can the rate of deposition of additional body lipid above the normal. Therefore, when predicting the weights of these components on feeds differing in protein content it would be necessary to predict the weight of each component when containing the normal amount of lipid and to add to this the additional amount of lipid expected as a result of the feeding programme used and the environment to which the bird is subjected.

In the two previous trials it was discovered that the day-old breast meat weights fell below the allometric regression, which was not found with any of the other body components measured. It was decided to investigate this further by measuring the weight of breast muscle on each day of the growing period in the first week after hatching, and to regress these weights against body protein weight, to see whether these weights grew at a faster rate than would be predicted by the allometric regression

The two objectives of this trial were thus to determine the extent to which lipid could be deposited above the normal in the breast, thigh, drum and wing of male and female broilers when given feeds differing in protein content, and to measure the daily rate of growth of breast meat in the first week after hatching.

5.2 MATERIALS AND METHODS

5.2.1 Animals and Housing

One thousand Ross 308, Cobb and Hybro day-old sexed broiler chickens were housed in the Rainbow house facility at Ukulinga research farm, University of KwaZulu-Natal. Twenty four pens were used with 62 chickens being placed initially per pen and with males and females being reared separately.

5.2.2 Duration of Experiment

The experiment was run for 8 weeks.

5.2.3 Feeds and feeding procedure

Chicks were fed a crumbled starter feed for the first four weeks and a pelleted grower feed from four to eight weeks. All the feeds in this trial were based on two starter and two finisher feeds, one high and the other low in protein, which were formulated (Table 5.1) to contain equal contents of ME and major minerals, using a well balanced amino acid mixture (Table 5.2). Feed composition changed every two weeks (Table 5.3). These two feeds were blended to produce two additional levels of protein (Table 5.3). The two basal feeds were sampled after mixing and these samples were analysed for apparent metabolisable energy (AME) and digestible amino acid contents. Feed and water were offered *ad libitum* throughout the trial.

Table 5.1 Ingredient composition (%) of the two basal feeds used in the trial

	Starter		Finisher	
Ingredient	HP	LP	HP	LP
Maize	43.37	61.43	63.23	71.85
Wheat bran		10.38		13.01
Soybean full fat	4.34			
Soybean 46	30.00	15.90	26.78	4.47
Sunflower 37	5.00			
Fish meal 65	7.50			
L-lysine HCl	0.39	0.26	0.24	0.19
DL methionine	0.16	0.07	0.14	0.01
L-threonine	0.12	0.05	0.08	0.01
Choline chloride 60%	0.04	0.78	0.13	0.82
Vit+min premix	0.15	0.15	0.15	0.15
Limestone	1.16	1.89	1.76	1.97
Salt			0.18	
Monocalcium phosphate	1.03	1.48	1.68	1.44
Sodium bicarbonate	0.25	0.74	0.27	0.75
Oil - sunflower	6.49	6.87	5.36	5.33
Total	100	100	100	100

Table 5.2 Chemical composition (%) of the two basal feeds used in the formulation

	Starter		Finisher	
Nutrient composition*	HP	LP	HP	LP
AME (MJ/kg)	13	13	13	13
Crude protein	26.42	14.45	18.08	10.34
Lysine	1.64	0.80	1.02	0.49
Methionine	0.58	0.28	0.40	0.18
Met + Cys	0.91	0.51	0.67	0.37
Threonine	0.99	0.51	0.67	0.32
Tryptophan	0.25	0.13	0.17	0.08
Arginine	1.62	0.83	1.11	0.52
Isoleucine	1.06	0.52	0.71	0.33
Leucine	1.96	1.25	1.54	1.02
Histidine	0.62	0.32	0.45	0.28
P + T	1.90	1.07	1.40	0.73
Valine	1.60	0.63	0.81	0.45
Ash	5.19	4.11	4.09	3.78
Crude fibre	3.59	3.18	2.73	3.11
Crude fat	10.1	9.79	8.11	8.59
Calcium	1.00	1.00	1.00	1.00
Avail. Phosphorous	0.50	0.50	0.50	0.50
Sodium	0.16	0.22	0.16	0.22
Chloride	0.22	0.21	0.22	0.21

*Digestible amino acids; M+C= Methionine + Cystine; P + T = Phenylalanine + Tyrosine

Table 5.3 Treatment and composition of feed type for each two-week period

	0 – 2 weeks			3 – 4 weeks			5 – 6 weeks			7 – 8 weeks		
Trt	HP	LP	Protein (g/kg)	HP	LP	Protein (g/kg)	HP	LP	Protein (g/kg)	HP	LP	Protein (g/kg)
1	100	0	264	60	40	216	100	0	181	60	40	150
2	75	25	234	40	60	193	75	25	162	40	60	134
3	50	50	205	20	80	169	50	50	142	20	80	119
4	24	76	174	0	100	145	24	76	122	0	100	103

5.2.4 Measurements

5.2.4.1 Feed Intake

Each pen was allocated a 50kg feed bag, from which three feed troughs were filled and then weighed at the beginning of the experiment. Feed was transferred from the bag to the feeding troughs when necessary. At the end of each week the feed remaining in each trough and in the bag were weighed, to determine the amount of feed consumed during the week.

5.2.4.2 Body weight

Body weight of a representative sample of birds in each pen was weighed at weekly intervals up to 56d. Mortality was monitored and recorded as it occurs.

5.2.4.3 Carcass analyses

Breast weights of two chickens from each treatment were collected every day for the first week to monitor the growth of this component. Thereafter, two birds were removed from each pen every two weeks to be treated in the following way:

1. Weight of each bird after killing (without loss of blood). At day old, six birds were sampled from each strain x sex, the weights of the parts were measured and then combined according to the list below from each strain and sex for chemical analysis.
2. Plucked weight (feather weight calculated by difference).
3. Weights of: Breast, without skin or bone
   Breast skin
   Thighs, with skin and bone
   Thigh meat
   Thigh skin
   Drums, with skin and bone
   Drum meat
   Drum skin
   Wings, with skin and bone
   Wing meat
   Wing skin
   Abdominal fat pad

4. All the parts were weighed and placed into a separate plastic bag and stored in freezer until drying took place.
5. After drying, each part was analysed for water and protein (N x 6.25).
6. Lipid content was calculated as the difference between the protein and water content.
7. Apart from weighing the breast, thighs, drums and wings, the gizzards and yolk sacs were also weighed, except at day-old (The relative weights of these components were calculated as g/kg body weight).

5.2.5 Experimental design

A factorial design was used, with four protein levels, three strains, and two sexes. Data were subjected to statistical analysis using Analysis of variance and linear regression procedures of Genstat (2002).

5.3 RESULTS

5.3.1 Carcass composition of chicks during the first week after hatching

Weights of breast, thighs, drums, wings, gizzards and yolk sacs were are in Tables 5.4.1 and 5.4.3. The relative weights of all components are given in Tables 5.4.2 and 5.4.4.

Whereas the weights of all the components increased each day, the relative growth rate of breast was considerably slower than that of all other components. For example, the relative weight of the thigh increased from 41 to 85 g/kg in the first two days after hatching and reached 92 g/kg on day 8; the drum increased from 40 to 71 g/kg, reaching 73 g/kg on day 8, and the wing increased from 20 to 43 g/kg, reaching 68 g/kg on day 8, whereas the relative weight of the breast remained the same for the first two days, then increased slowly at a rate of about 13 g/kg/d to reach 80 g/kg on day 8. The relative weights of gizzard and yolk decreased with age, the gizzard decreasing from 83 to 58 g/kg body weight and the yolk from 41 to 1 g/kg.

Table 5.4.1 Mean component weights (g) of female and male broilers from day old to 8 days of age

	Breast			Thighs			Drums			Wings		
Age (day)	F	M	Mean	F	M	Mean	F	M	Mean	F	M	Mean
1	0.54	0.64	0.59	1.64	1.71	1.68	1.50	1.81	1.66	0.78	0.87	0.83
2	0.85	0.72	0.79	4.89	4.83	4.86	4.15	3.98	4.07	2.41	2.48	2.45
3	1.39	1.65	1.52	5.50	5.98	5.74	4.88	4.94	4.91	3.18	3.16	3.17
4	3.51	2.73	3.12	7.82	6.38	7.10	6.05	6.14	6.10	4.49	3.52	4.01
5	5.63	5.92	5.78	8.88	9.12	9.00	7.60	8.20	7.90	5.68	5.59	5.63
6	7.42	8.42	7.92	10.81	12.07	11.44	8.72	9.09	8.90	7.60	7.92	7.76
7	11.34	11.39	11.37	14.79	14.73	14.76	11.24	10.88	11.06	10.19	9.39	9.79
8	14.71	15.15	14.93	17.38	16.83	17.11	14.21	13.11	13.66	13.70	11.61	12.65
RMS[1]		1.303			2.856			0.934			1.091	

[1] Residual mean square

Table 5.4.2 Relative component weights (g/kg body weight) of female and male broilers from day old to 8 days of age

	Breast			Thighs			Drums			Wings		
Age (day)	F	M	Mean	F	M	Mean	F	M	Mean	F	M	Mean
1	13.1	15.6	14.4	39.9	41.6	40.9	36.5	44.1	40.4	19.0	21.2	20.2
2	14.9	12.6	13.9	85.8	84.7	85.3	72.8	69.8	71.4	42.3	43.5	43.0
3	20.4	24.2	22.3	80.8	87.8	84.3	71.7	72.5	72.1	46.7	46.4	46.5
4	40.3	31.3	35.8	89.8	73.2	81.5	69.5	70.5	70.0	51.5	40.4	46.0
5	53.8	56.5	55.2	84.8	87.1	86.0	72.6	78.3	75.5	54.3	53.4	53.8
6	61.3	69.6	65.5	89.3	99.8	94.5	72.1	75.1	73.6	62.8	65.5	64.1
7	74.5	74.8	74.7	97.2	96.8	97.0	73.9	71.5	72.7	67.0	61.7	64.3
8	78.8	81.1	80.0	93.1	90.1	91.6	76.1	70.2	73.2	73.4	62.2	67.8

Table 5.4.3 Mean weights (g) of gizzard and yolk of female and male broilers from day-old to 8 days of age

	Gizzard			Yolk		
Age, d	F	M	Mean	F	M	Mean
2	4.67	4.74	4.71	1.71	3.01	2.36
3	5.58	5.46	5.52	1.53	1.33	1.43
4	6.37	6.20	6.29	0.85	0.51	0.68
5	6.90	8.05	7.48	0.55	0.37	0.46
6	7.71	8.13	7.92	0.26	0.29	0.27
7	7.23	9.68	8.45	0.25	0.20	0.23
8	10.45	11.01	10.73	0.15	0.16	0.16
RMS[1]		1.763			0.864	

[1] Residual mean square

Table 5.4.4 Relative weights (g/kg body weight) of gizzard and yolk of female and male broilers from day-old to 8 days of age

	Gizzard			Yolk		
Age, d	F	M	Mean	F	M	Mean
2	81.9	83.2	82.6	30.0	52.8	41.4
3	81.9	80.2	81.1	22.5	19.5	21.0
4	73.1	71.2	72.2	9.8	5.9	7.8
5	65.9	76.9	71.4	5.3	3.5	4.4
6	63.7	67.2	65.5	2.1	2.4	2.2
7	47.5	63.6	55.5	1.6	1.3	1.5
8	56.0	59.0	57.5	0.8	0.9	0.9

5.3.2 Carcass composition of broilers to 56 d of age

The results of the carcass composition study of each of the parts of the body sampled, at two-weekly intervals to 56 d of age, are presented separately for water, protein and lipid.

5.3.2.1 Water content

The water content of the meat and skin of breast, thigh, drum and wing of males and females of three strains of broilers, fed four levels of dietary protein, at four ages is given in Table 5.5. In the case of breast meat, all main effects (Age, Feed, Sex and Strain) differed significantly ($P>0.05$), with males having a higher (720 vs. 716 g/kg) content than females; birds on the highest protein content having the highest; and the Cobb strain the lowest water content in breast meat. The mean water content of breast skin was lower (400 vs. 718 g/kg) than that of breast meat, with all main effects again showing significant differences. The mean water content of thigh meat was 645 g/kg, vs. 340 g/kg in the thigh skin. Whereas all main effects were significantly different in the case of thigh meat, only Age exhibited significant differences with thigh skin. Age and Feed were the only factors having a significant effect on the water content of drum meat, whereas with the skin, these factors plus Sex and Strain all had a significant effect. The mean water content of drum meat was 724 vs. 426 g/kg for the skin. The mean water content of wing meat was 700 vs. 500 g/kg for wing skin. These contents were affected significantly only by Age, and by Age and Sex respectively. Row data from this trial are presented in Appendix Chapter 5 on the attached CD.

Table 5.5 Water content (g/kg) of meat and skin of breast, thigh, drum and wing of males and females of three strains of broilers, fed four levels of dietary protein, at four ages

Breast Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	741	752	756	750	736	754	748
	2	739	747	733	737	751	742	741
	3	733	746	754	735	750	748	744
	4	736	738	741	728	743	750	739
28	1	710	723	721	721	728	741	724
	2	702	723	709	711	730	718	715
	3	707	714	708	711	725	706	712
	4	707	717	715	712	723	702	713
42	1	702	717	698	720	715	721	712
	2	712	706	704	713	720	719	712
	3	722	703	689	719	710	705	708
	4	695	709	705	695	716	722	707
56	1	707	692	697	706	709	704	702
	2	688	710	700	698	688	698	697
	3	693	718	702	712	710	704	707
	4	696	699	713	701	710	705	704
	RSD[4]				0.55			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.5 Continued

Breast Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	471	489	498	508	464	481	485
	2	429	491	502	446	478	461	468
	3	372	486	401	391	447	443	423
	4	368	399	369	413	457	410	403
28	1	421	424	438	414	468	433	433
	2	416	452	496	450	460	444	453
	3	344	365	388	439	431	442	401
	4	356	391	331	402	395	395	378
42	1	314	412	334	419	442	487	401
	2	360	365	376	435	431	394	393
	3	359	339	331	382	384	407	367
	4	276	354	370	318	410	378	351
56	1	393	350	294	382	418	325	360
	2	333	379	337	394	417	428	381
	3	336	326	324	443	423	477	388
	4	282	329	294	362	381	354	334
	RSD[4]				6.83			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.5 Continued

Thigh Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	674	682	695	697	673	673	682
	2	681	670	659	687	676	675	675
	3	672	650	663	650	649	687	662
	4	701	646	634	645	653	669	658
28	1	678	679	673	674	684	683	678
	2	625	696	621	673	669	638	654
	3	667	623	603	618	647	635	632
	4	632	587	613	625	639	646	624
42	1	641	656	625	674	673	654	654
	2	642	645	290	680	674	650	597
	3	672	620	600	639	656	611	633
	4	633	624	617	613	630	629	624
56	1	672	652	634	681	670	655	661
	2	647	644	610	643	658	648	642
	3	649	631	649	667	653	618	644
	4	619	606	632	608	635	619	620
	RSD[4]			13.6				

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.5 Continued

Thigh Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	381	441	442	458	428	395	424
	2	407	413	443	385	463	441	425
	3	407	387	373	355	371	391	381
	4	481	350	319	386	418	352	385
28	1	354	382	368	359	407	364	372
	2	333	383	408	340	411	402	379
	3	299	315	303	357	379	389	340
	4	333	343	320	304	348	322	328
42	1	216	324	275	361	383	425	331
	2	258	306	722	348	372	313	387
	3	307	260	263	296	281	320	288
	4	198	269	284	263	326	281	270
56	1	295	255	219	306	369	263	285
	2	224	253	257	278	357	306	279
	3	273	255	226	294	359	239	274
	4	223	243	604	236	285	280	312
	RSD[4]			46.3				

[1] F= Female, M= Male

[2] C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.5 Continued

Drum Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	754	755	751	764	744	755	754
	2	751	752	736	755	753	758	751
	3	760	751	759	735	753	755	752
	4	669	741	744	757	747	738	733
28	1	747	751	725	746	733	740	740
	2	711	751	759	683	731	708	724
	3	717	708	744	724	716	709	720
	4	718	689	700	729	719	706	710
42	1	719	714	714	726	741	704	720
	2	723	693	631	737	722	708	702
	3	732	725	715	711	734	710	721
	4	711	700	708	718	727	705	711
56	1	806	920	687	721	692	713	756
	2	688	710	681	692	706	704	697
	3	700	690	715	709	707	697	703
	4	635	681	688	681	708	685	680
	RSD[4]				7.43			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.5 Continued

Drum Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	496	582	564	550	523	564	546
	2	479	594	568	452	538	538	528
	3	455	622	444	422	454	511	485
	4	378	450	436	489	563	457	462
28	1	447	483	417	453	516	498	469
	2	404	455	534	441	522	457	469
	3	370	404	428	469	470	471	435
	4	419	414	350	450	417	407	409
42	1	327	351	352	450	474	489	407
	2	292	371	384	449	422	388	384
	3	355	358	362	415	409	470	395
	4	288	359	366	352	412	365	357
56	1	356	327	366	434	466	303	375
	2	330	381	360	393	441	392	383
	3	314	316	400	431	397	302	360
	4	272	337	355	378	346	361	341
	RSD[4]				20.2			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.5 Continued

Wing Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	730	729	732	738	734	740	734
	2	727	727	696	724	741	735	725
	3	725	730	729	726	728	733	729
	4	732	705	714	700	721	707	713
28	1	710	709	705	716	697	705	707
	2	683	715	703	710	709	716	706
	3	703	698	684	684	688	705	693
	4	724	681	664	698	716	676	693
42	1	667	687	674	694	702	687	685
	2	674	665	692	696	695	704	688
	3	696	700	677	695	712	680	693
	4	655	682	678	705	699	698	686
56	1	954	677	681	707	722	685	738
	2	807	710	694	680	694	719	717
	3	671	660	322	707	701	671	622
	4	664	674	677	704	701	688	685
	RSD[4]				16.6			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.5 Continued

Wing Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	569	596	599	578	628	581	592
	2	566	558	614	578	639	612	594
	3	569	588	564	531	579	594	571
	4	563	531	497	542	603	510	541
28	1	535	562	561	529	586	606	563
	2	519	589	544	526	597	576	559
	3	470	490	496	580	570	579	531
	4	521	558	315	634	545	537	518
42	1	401	461	434	486	528	564	479
	2	464	445	451	521	518	464	477
	3	469	470	401	462	483	495	463
	4	391	455	437	430	481	457	442
56	1	435	394	441	483	499	474	454
	2	434	398	403	546	361	499	440
	3	379	412	688	511	484	372	474
	4	377	366	355	453	438	465	409
	RSD[4]				36.5			

[1] F= Female, M= Male

[2] C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

5.3.2.2 Protein content

Protein contents, expressed on an as is basis, of the meat and skin of breast, thigh, drum and wing of males and females of three strains of broiler fed four levels of protein, at four ages (14, 28, 42 and 56 d) are given in Table 5.6. The main effects of the four factors are given in Appendix Chapter 5 together with the Analysis of Variance of main effects and two-way interactions on the attached CD. Age, Feed and the interaction between Age x Sex caused significant differences ($P>0.05$) in the protein content of breast meat, whilst Feed and Sex were responsible for significant differences in the protein content of breast skin. The mean protein content in breast meat was 239 g/kg, and in breast skin only 112 g/kg. None of the factors caused significant differences in the protein content of thigh meat, but Age, Feed, Sex and the Age x Sex interaction were responsible for significant (P>0.05) differences in the protein content of thigh skin, the mean of which was half of that of thigh meat (88 vs. 184 g/kg). The protein content of drum meat (mean of 194 g/kg) increased significantly with Age, with no other factors having an effect, whereas that in drum skin was influenced by Age, Feed, Sex and the interactions Age x Feed, Age x Strain and Feed x Strain. Mean protein content of drum skin was 120 g/kg. Age and Sex x Strain influenced the protein content of wing meat, whereas the feed protein content influenced the wing skin content. Mean protein contents were 204 and 131 g/kg respectively for the meat and skin.

Table 5.6 Protein content (g/kg) of meat and skin of breast, thigh, drum and wing of males and females of three strains of broilers, fed four levels of dietary protein, at four ages

Breast Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	211	223	212	223	240	218	221
	2	225	229	243	234	231	237	233
	3	219	215	228	242	234	234	229
	4	218	225	215	232	225	221	223
28	1	256	249	249	233	235	230	242
	2	246	238	251	245	232	238	242
	3	248	238	237	238	228	243	239
	4	237	229	228	232	237	249	235
42	1	249	242	247	241	230	239	241
	2	247	247	244	249	231	241	243
	3	236	250	231	230	244	245	239
	4	250	243	239	247	236	232	241
56	1	238	246	251	254	234	225	241
	2	256	252	259	247	266	264	257
	3	230	240	252	247	249	241	243
	4	248	241	244	254	246	232	244
	RSD[4]			0.49				

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.6 Continued

Breast Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	129	115	169	93	106	129	123
	2	85	124	112	129	102	121	112
	3	82	109	80	79	104	83	89
	4	70	59	77	101	135	144	98
28	1	156	129	136	111	152	158	140
	2	93	88	122	136	129	83	108
	3	119	147	111	135	178	113	134
	4	118	103	122	92	96	112	107
42	1	105	159	117	100	160	123	127
	2	99	86	116	143	119	103	111
	3	110	103	64	113	106	89	97
	4	67	116	150	87	152	91	110
56	1	185	76	71	114	136	162	124
	2	104	96	91	94	209	172	128
	3	95	66	103	108	104	176	109
	4	83	60	96	69	146	82	89
	RSD[4]			4.65				

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.6 Continued

Thigh meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	240	172	203	191	167	164	189
	2	182	169	172	217	153	183	179
	3	141	142	158	139	198	186	161
	4	178	156	170	198	198	168	178
28	1	189	173	158	185	188	157	175
	2	190	159	180	237	167	181	186
	3	163	175	190	172	179	182	177
	4	179	166	177	171	170	191	176
42	1	190	176	234	174	185	179	190
	2	186	184	350	168	172	175	206
	3	190	173	181	191	182	179	183
	4	196	177	197	177	177	170	182
56	1	195	202	186	188	200	218	198
	2	185	197	205	188	201	189	194
	3	192	190	188	184	180	186	187
	4	180	200	175	179	177	190	184
	RSD[4]			3.26				

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.6 Continued

Thigh Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	96	111	121	99	103	137	111
	2	104	108	117	111	117	89	108
	3	88	100	95	87	80	110	93
	4	113	88	93	93	99	93	96
28	1	94	123	109	99	100	137	110
	2	105	80	76	110	101	129	100
	3	65	116	85	79	83	92	87
	4	105	82	67	93	85	82	86
42	1	59	41	67	120	88	120	82
	2	70	76	30	108	98	105	81
	3	80	97	64	102	83	79	84
	4	70	65	75	88	92	77	78
56	1	65	64	76	93	119	60	80
	2	59	76	62	64	115	124	83
	3	57	77	56	97	80	82	75
	4	66	66	26	75	73	79	64
	RSD[4]			2.87				

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.6 Continued

Drum Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	208	158	210	184	181	182	187
	2	196	180	205	174	181	198	189
	3	195	174	180	203	180	190	187
	4	185	187	173	178	183	188	182
28	1	201	161	195	183	187	202	188
	2	214	177	181	166	192	192	187
	3	201	188	191	173	183	189	187
	4	200	196	201	183	176	188	191
42	1	203	239	194	197	196	196	204
	2	195	201	262	189	186	194	205
	3	200	199	201	180	194	198	195
	4	201	191	197	186	202	203	197
56	1	221	189	209	205	178	203	201
	2	209	210	207	216	197	221	210
	3	196	187	201	198	194	217	199
	4	209	192	192	193	197	195	196
	RSD[4]				2.21			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.6 Continued

Drum Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	179	213	173	104	180	138	165
	2	90	173	145	155	130	114	134
	3	120	157	107	102	167	122	129
	4	144	96	87	113	138	124	117
28	1	127	264	169	114	190	159	170
	2	69	113	131	149	154	114	121
	3	110	119	163	149	96	141	130
	4	114	66	93	146	118	117	109
42	1	84	147	69	100	160	153	119
	2	104	107	102	85	100	126	104
	3	105	226	121	120	157	133	144
	4	115	80	89	98	136	111	105
56	1	97	60	101	97	128	105	98
	2	124	129	109	168	151	136	136
	3	134	100	66	126	79	76	97
	4	70	64	77	186	103	81	97
	RSD[4]				6.95			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.6 Continued

Wing Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	197	189	211	186	198	187	195
	2	209	211	201	211	178	192	200
	3	172	187	186	190	195	175	184
	4	185	200	212	212	202	190	200
28	1	221	203	215	197	217	205	209
	2	200	177	202	188	223	185	196
	3	189	119	220	191	211	195	188
	4	193	206	213	130	185	211	190
42	1	225	205	210	216	210	209	213
	2	184	207	208	206	202	200	201
	3	195	181	210	217	205	120	188
	4	199	189	196	195	210	186	196
56	1	175	205	208	221	200	227	206
	2	158	208	213	220	217	205	204
	3	226	213	481	198	201	222	257
	4	190	203	195	205	208	210	202
	RSD[4]				7.05			

Table 5.6 Continued

Wing Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	129	174	156	135	156	163	152
	2	132	150	150	141	144	135	142
	3	140	150	166	126	133	150	144
	4	132	139	116	124	161	121	132
28	1	150	189	115	122	121	181	146
	2	132	134	116	150	142	119	132
	3	138	169	163	123	139	198	155
	4	122	94	59	97	142	114	105
42	1	132	126	100	124	135	137	126
	2	124	90	101	145	125	116	117
	3	117	386	118	133	133	126	169
	4	89	113	126	109	107	98	107
56	1	151	107	82	118	116	86	110
	2	181	174	91	137	145	111	140
	3	163	107	61	115	126	105	113
	4	106	123	57	100	77	132	99
	RSD[4]				13.7			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

5.3.2.3 Lipid content

The mean lipid contents (on an as is basis) of meat and skin of the breast, thigh, drum and wing of males and females of three strains of broilers, fed four levels of dietary protein, at four ages are given in Table 5.7. As with the water and protein contents of these parts, the main effects of the four factors on lipid content are given in Appendix Chapter 5 together with the Analysis of Variance of main effects and two-way interactions. Age, Feed and Sex had significant ($P>0.05$) effects on the lipid content of breast meat, which was considerably lower than that in breast skin (44 vs. 487 g/kg). The latter was influenced by all four factors as well as an Age x Sex interaction.

Whereas the difference in lipid content between females and males in breast meat was only 4 g/kg (46 vs. 42) the difference in breast skin was 55 g/kg (514 vs. 459 g/kg respectively).

Table 5.7 Lipid content (g/kg) of meat and skin of breast, thigh, drum and wing of males and females of three strains of broilers, fed four levels of dietary protein, at four ages

Breast Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	48	25	32	27	24	29	31
	2	36	24	25	29	18	22	26
	3	48	39	18	23	17	18	27
	4	46	37	44	40	32	29	38
28	1	34	28	30	46	37	29	34
	2	52	39	41	44	38	44	43
	3	45	48	55	51	48	51	49
	4	57	54	57	56	40	48	52
42	1	49	41	54	39	55	40	46
	2	41	48	52	38	49	40	45
	3	42	47	81	51	46	51	53
	4	55	48	57	58	48	46	52
56	1	55	62	51	41	57	71	56
	2	57	38	41	55	46	38	46
	3	76	42	46	40	41	55	50
	4	57	60	44	45	44	63	52
	RSD[4]				0.56			

[1] F= Female, M= Male

[2] C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.7 Continued

Breast Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	400	397	333	399	430	391	392
	2	486	385	386	425	419	418	420
	3	546	406	519	530	449	473	487
	4	563	542	554	486	408	446	500
28	1	423	447	425	475	380	410	427
	2	491	461	383	414	411	473	439
	3	537	487	501	426	392	445	465
	4	526	507	547	506	510	492	515
42	1	581	429	549	481	398	390	471
	2	541	550	509	423	450	503	496
	3	531	557	605	505	510	505	535
	4	657	531	480	595	438	531	539
56	1	422	574	636	504	446	514	516
	2	562	526	572	512	374	400	491
	3	570	608	573	449	473	347	503
	4	635	611	610	570	473	564	577
	RSD[4]				16.4			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.7 Continued

Thigh Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	87	147	102	112	160	163	128
	2	137	161	169	96	172	142	146
	3	187	208	179	211	154	127	178
	4	121	198	197	157	149	164	164
28	1	133	148	169	141	129	161	147
	2	185	144	199	90	164	181	161
	3	170	202	208	210	174	183	191
	4	189	247	210	204	191	163	201
42	1	169	168	237	152	142	167	172
	2	172	171	360	152	154	175	198
	3	138	207	219	170	162	210	184
	4	172	200	186	211	193	200	194
56	1	133	146	179	131	130	128	141
	2	168	159	185	169	141	164	164
	3	159	179	163	150	167	196	169
	4	201	193	183	213	188	190	195
	RSD[4]				28.8			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.7 Continued

Thigh Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	524	448	437	443	470	469	465
	2	489	479	440	505	420	470	467
	3	505	514	532	558	549	499	526
	4	406	562	588	521	482	555	519
28	1	515	496	523	543	493	499	511
	2	562	537	516	551	489	469	521
	3	636	569	612	564	538	519	573
	4	562	576	613	603	567	596	586
42	1	725	812	658	520	529	455	616
	2	672	618	248	545	530	582	532
	3	613	643	673	602	637	790	660
	4	732	666	641	649	583	642	652
56	1	640	682	705	601	511	676	636
	2	717	671	681	658	528	570	638
	3	670	668	718	610	561	679	651
	4	711	690	371	690	642	642	624
	RSD[4]				7.5			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.7 Continued

Drum Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	38	87	39	52	75	63	59
	2	53	68	60	71	65	44	60
	3	46	75	61	63	67	56	61
	4	146	72	83	65	70	75	85
28	1	53	89	79	71	80	59	72
	2	75	72	60	151	77	100	89
	3	82	104	65	103	102	102	93
	4	82	115	99	88	105	106	99
42	1	78	47	93	77	63	100	76
	2	82	106	108	74	92	98	93
	3	68	76	84	109	73	92	84
	4	88	109	96	96	71	93	92
56	1	98	143	104	74	130	84	106
	2	103	81	113	92	97	76	94
	3	105	124	84	94	99	86	99
	4	156	127	120	125	95	120	124
	RSD[4]				2.59			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.7 Continued

Drum Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	325	205	263	346	297	298	289
	2	430	233	288	393	332	348	337
	3	425	220	450	476	379	367	386
	4	478	454	476	398	299	419	421
28	1	426	253	414	433	294	343	360
	2	527	432	336	411	324	430	410
	3	520	477	409	383	434	388	435
	4	467	520	557	405	465	476	482
42	1	589	502	579	450	366	358	474
	2	604	522	515	467	478	486	512
	3	540	417	517	465	434	398	462
	4	598	562	546	550	452	525	539
56	1	547	613	534	469	406	592	527
	2	546	491	531	440	409	472	481
	3	552	584	534	444	525	622	543
	4	658	599	569	437	551	559	562
	RSD[4]				28.8			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.7 Continued

Wing Meat		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	73	82	57	76	68	72	72
	2	64	63	103	65	82	73	75
	3	104	83	85	84	77	93	88
	4	84	95	74	88	77	103	87
28	1	69	88	80	87	86	90	84
	2	117	108	95	102	68	100	98
	3	108	98	96	125	101	100	105
	4	83	113	123	60	99	113	98
42	1	108	107	117	90	88	104	102
	2	142	128	99	97	103	97	111
	3	110	120	113	88	83	83	99
	4	146	130	126	101	91	116	118
56	1	81	117	112	72	78	89	92
	2	94	82	93	99	89	76	89
	3	103	127	197	95	99	107	121
	4	146	123	128	92	91	102	114
	RSD[4]				2.29			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

Table 5.7 Continued

Wing Skin		F[1]			M			
Age (day)	Feed Protein Level	C[2]	H	R	C	H	R	Mean
14	1[3]	301	231	245	287	217	255	256
	2	302	293	236	281	217	253	264
	3	291	262	270	344	289	256	285
	4	305	330	387	334	236	370	327
28	1	315	250	323	350	293	213	291
	2	349	277	340	324	261	305	309
	3	392	341	342	298	291	223	314
	4	357	348	511	269	313	349	358
42	1	467	413	466	390	337	299	395
	2	413	466	448	334	357	420	406
	3	415	144	482	405	384	380	368
	4	520	432	437	461	412	446	451
56	1	414	499	477	399	385	440	436
	2	385	429	507	323	494	390	421
	3	459	481	251	374	391	523	413
	4	517	511	589	448	484	403	492
	RSD[4]				56.1			

[1] F= Female, M= Male

[2]C= Cobb, H= Hybro, R= Ross 308

[3] See Tables 5.2 and 5.3

[4] RSD= Residual Standard Deviation

The difference in lipid content between thigh meat and skin (171 vs. 572 g/kg) was less than the ten-fold difference between breast meat and skin and the five-fold difference between drum meat and skin (86 vs. 452 g/kg) but similar to that between wing meat and skin (92 vs. 362 g/kg). Thigh meat lipid content was influenced significantly by all four factors, whereas the lipid content of the thigh skin was influenced by all but Strain. The lipid content of wing meat differed significantly (P>0.05) between Ages, Feeds (increasing from 88 to 104 g/kg as the feed protein content was reduced), Sexes (104 vs. 89 g/kg for females and males respectively), and there was an Age x Sex interaction. Lipid in the wing skin was influenced significantly by Age, Feed (increasing from 344 to 404 g/kg as the feed protein content was decreased) and Sex (378 vs. 345 g/kg for females and males respectively).

5.3.3 Effect of dietary protein on chemical composition of parts

As there were no statistically significant interactions between the feed protein level used and any of the other factors (sex and strain), the weights of meat and skin of the breast, thigh, drum and wing of the broilers sampled at 2, 4, 6 and 8 weeks were regressed against the level of dietary protein (given values 1, 2, 3 and 4, as the intervals between levels were the same), and the results of these analyses are given in Table 5.8. In the case of the lipid content of the various tissues, all the regression coefficients were positive, indicating that the lipid content increased as the dietary protein content was reduced. In all cases these coefficients were statistically significant ($P<0.05$).

Table 5.8 Coefficients (± S.E.) of response and mean lipid content (g/kg) of meat and skin of breast, thigh, drum and wing of broilers, when regressed against the four dietary protein levels fed over an 8-week rearing period. Broilers were sampled at 2, 4, 6 and 8 weeks

Part	Coefficient (± S.E.)	Dietary Protein Level[1] 1	2	3	4
Breast meat	2.53 (1.11)	42	40	45	49
Breast skin	28.6 (5.90)	451	461	501	533
Thigh meat	14.9 (3.00)	145	167	181	189
Thigh skin	19.9 (8.18)	557	539	596	596
Drum meat	7.76 (2.07)	78	84	84	100
Drum skin	28.6 (8.62)	413	435	457	501
Wing meat	6.69 (1.90)	88	94	102	104
Wing skin	16.6 (8.17)	344	351	345	404

[1] See Tables 5.2 and 5.3

The results of the regression of protein content against feed protein level are given in Table 5.9. Contrary to the lipid results, the coefficients of response in this case were all negative, indicating that the protein content of each of the tissues sampled was reduced with the dietary protein content. Similarly, in Table 5.10, the water content of the various parts also declined with dietary protein content.

Table 5.9 Coefficients (± S.E.) of response and mean protein content (g/kg) of meat and skin of breast, thigh, drum and wing of broilers, when regressed against the four dietary protein levels fed over an 8-week rearing period. Broilers were sampled at 2, 4, 6 and 8 weeks

Part	Coefficient	Dietary Protein Level[1]			
	(± S.E.)	1	2	3	4
Breast meat	-8.30 (1.04)	236	244	237	236
Breast skin	-9.31 (2.59)	129	115	106	101
Thigh meat	-3.32 (2.23)	186	191	178	181
Thigh skin	-6.01 (1.93)	95	93	85	81
Drum meat	-1.40 (1.37)	194	198	192	192
Drum skin	-9.25 (3.25)	138	124	125	107
Wing meat	-1.22 (2.99)	208	203	206	200
Wing skin	-4.80 (3.44)	134	135	145	112

[1] See Tables 5.2 and 5.3

Table 5.10 Coefficients (± S.E.) of response and mean water content (g/kg) of meat and skin of breast, thigh, drum and wing of broilers, when regressed against the four dietary protein levels fed over an 8-week rearing period. Broilers were sampled at 2, 4, 6 and 8 weeks

Part	Coefficient	Dietary Protein Level[1]			
	(± S.E.)	1	2	3	4
Breast meat	-0.17 (0.16)	722	716	718	716
Breast skin	-1.93 (0.46)	420	424	394	366
Thigh meat	-1.11 (0.40)	669	642	643	629
Thigh skin	-1.35 (0.73)	353	368	321	324
Drum meat	-0.88 (0.30)	743	718	724	708
Drum skin	-1.94 (0.67)	450	441	419	392
Wing meat	-0.85 (0.46)	716	704	684	694
Wing skin	-1.40 (0.69)	522	514	510	478

[1] See Tables 5.2 and 5.3

5.4 DISCUSSION

5.4.1 Composition during the first week after hatching

It became apparent in earlier trials in which breast meat was measured in terms of body protein weight that the weight of the breast at day-old was smaller than predicted, considering the allometric relationship after 2 weeks of age. The relative weights of breast meat measured over the first 8 d after hatching increased at a considerably slower rate than those of the thigh, drum and wing, suggesting that the breast was at a lower degree of maturity at hatching than the other parts. It would be interesting to measure the number of satellite cells present in the breast muscle at day-old and then again a few days later, and to compare the change in numbers with those occurring in the other muscles. Future research could address this issue by comparing satellite cell development in chicks fed immediately after hatching (early feeding) with those held for a few days without access to food, as early feeding has been shown to increase the rate at which the gut develops (Noy and Sklan, 1997). Also, high protein feeds have been shown to increase breast meat yield later in the growing period (Kemp *et al*., 2005) suggesting that satellite cell development may be encouraged with the use of high protein feeds, and this could be tested by measuring satellite cell development in the period immediately after hatching.

The relative weight of the yolk declined with age as expected, as it is no longer needed after feed has been consumed by the chick (Noy and Sklan, 1997; 1998).

5.4.2 Composition of parts to 56 d of age

The objective of this trial was to collect data relating to the extent to which lipid could be deposited in some of the commercially important parts of the broiler, and to ascertain the rate at which this would occur in these parts. Such information would be of benefit when modelling the effect of dietary protein on the weights of these parts, as adjustments could be made to the weights predicted when using the allometric relationships with body protein. These have been shown, above, to differ systematically depending on the protein content used in the feed.

Because the parts analysed here were devoid of bone, they consisted of only three chemical components, namely, water, protein and lipid. After drying the samples to obtain the water content, and determining the protein (N) content, the lipid content was calculated by difference. The results of the chemical analyses reflect the negative correlation between lipid and the other two components, with lipid content increasing in all cases as the dietary protein content declined (Table 5.8) confirming the results reported earlier in this thesis and many reports in the literature on the effect of dietary protein on body lipid content (c.f. Gous *et al*., 1990). No data on the lipid content of different parts of the body of broilers have been published previously, so comparisons with previous literature cannot be made.

Of interest were the considerable differences in lipid content between the meat and skin of all the parts, these differences being greatest in the case of breast, and least between the thigh meat and skin. Breast meat contained very little lipid (50 g/kg) compared with that in the skin (over 500 g/kg). When modelling the growth of these commercially important parts of a broiler it is therefore necessary to predict the weights, and compositions, of the meat and skin separately, given these large differences in lipid content.

In Chapter 2 it was noted that the difference in predicted breast meat weight (without skin) for a 3 kg broiler reared on a high vs. a low protein feed, using the allometric regressions derived in the first trial, was 15 g, the heavier weight being from broilers raised on the high protein feed. However, predicted thigh weight for the same birds was 29 g heavier, drum weight was 7 g heavier, and wing weight was 5 g heavier on the low protein feed. These differences conform to those measured in this trial: at 56 d the lipid content of breast meat did not differ on the highest and lowest feed protein contents whereas the lipid content on the low protein feed was 55 g/kg higher in thigh meat, 18 g higher in drum meat and 22 g higher in wing meat. Once these differences are accounted for, the prediction of the weights of these parts on feeds varying in protein content would be expected to be more accurate than if no account is taken of the differential amount of lipid deposited in these tissues. The data collected here will make this possible. This would be accomplished by assuming that the 'normal' amount of lipid to be deposited in each tissue is that deposited on the high protein feed, and then to add an additional fraction to a maximum of what was deposited on the low protein feed.

5.5 CONCLUSIONS

The amount of lipid deposited in the meat and skin of the various parts has been shown to vary considerably between tissues, making it necessary to consider separately the development of meat and skin of the various parts, and the minimum and maximum amounts of lipid that can be deposited in these tissues. The data collected in this trial may be used to adjust the weights of the commercially important physical parts of a broiler predicted by means of the allometric relationships that exist between the parts and body protein weight.

REFERENCES

Aviagen (2008). Optimising breast meat yield in broilers. http://www.aviagen.com/output.aspx?%20sec=2040&con=827&siteId=1%20 accessed, September 2008.

AOAC (2003) Official methods of analysis (17th Ed.). Association of official analytical chemists, Inc., Arlington, Washington, USA.

Barton, N.F. (1994). Breeding meat type poultry for the future targets for selection limits to performance and market requirements for chicken. *Proceedings of the 9th European Poultry Conference*., Glasgow, U.K., pp. 33-38.

Bartov, I. and Plavnik, I. (1998). Moderate excess of dietary protein increases breast meat yield of broiler chicks. *Poultry Science* **77**: 680-688.

Baeza, E., Dessay, C., Wacrenier, N., Marche, G. and Listrat, A. (2002). Effect of selection for improved body weight and composition on muscle and meat characteristics in Muscovy duck. *British Poultry Science*, **43**: 560-568.

Bellairs, R. (1993). Fertilization and early embryonic development in poultry. *Poultry Science* **72**: 874-881.

Bellairs, R. and Osmond, M. (2005). *The Atlas of Chick Development*. Academic Press, London.

Berri, C., Wacrenier, N., Millet, N. and Le Bihan-Duval, E. (2001). Effect of selection for improved body composition on muscle and meat characteristics of broilers from experimental and commercial lines. *Poultry Science* **80:** 833 – 838.

Cahaner, A. and Leenstra, F. (1992a). Effects of high temperature on growth and efficiency of male and female broilers from lines selected high weight gain, favorable feed conversion, and high or low fat content. *Poultry Science*, **71**: 1237-1250.

Cahaner, A. and Leenstra, F., (1992b). Effects of low, normal, and high temperatures on slaughter yield of broilers from lines selected for high weight gain, favorable feed conversion, and high or low fat content. *Poultry Science* **71:** 1994-2006.

Cobb (2008) http://www.cobb-vantress.com/ accessed November 2008

Collins, C.A., Olsen, I., Zammit, P.S., Heslop, L., Petrie, A., Partridge, T.A. and Morgan, J.E. (2005). Stem cell function, self-renewal, and behavioural heterogeneity of cells from the adult muscle satellite cell niche. *Cell* **122:** 289-301.

Chambers, J.R. (1990). Genetics of Growth and Meat Production in Chickens. In: *Poultry Breeding and Genetics*. (Eds.) Crawford, R.D., Developments in Animal and Veterinary Sciences, 22, Elsevier Health Sciences, pp. 599-645.

Danisman and Gous (2008). Predicting the physical parts of broilers. *Proceedings of the XXVII World's Poultry Congress,* Brisbane, Australia.

Deeming, D.C. (2002). Embryonic development and utilization of egg components. In: *Avian Incubation: Behaviour, Environment and Evolution*. (Eds.) Deeming, D.C., Oxford University Press, Oxford, U.K., pp. 43-53.

Dozier, W. A., Kidd, M. T., Corzo, A., Anderson, J. and Branton S. L. (2006). Growth performance, meat yield, and economic responses of broilers provided diets varying in amino acid density from thirty-six to fifty-nine days of age. *Journal of Applied Poultry Research* **15:** 383-393.

EFG Software (2007) http://www.efgsoftware.net/ accessed July 2007

Emmans, G.C. (1981). A model of the growth and feed intake of *ad libitum* fed animals, particularly poultry. In: *Computers in Animal Production*. *British Society of Animal Production* **5:** 103-110.

Emmans, G.C. and Fisher, C. (1986). Problems in nutritional theory. In: *Nutrient Requirements of Poultry and Nutritional Research.* (Eds.) Fisher C. and Boorman K.N., Butterworths, Oxford, pp 9-39.

Emmans, G.C. (1987). Growth, body composition and feed intake. *World's Poultry Science Journal* **43:** 208 - 227.

Emmans, G.C. and Kyriazakis, I. (1999). *Growth and body composition*. Wallingford, CABI Publishing.

Fisher, C. and McNab J. M. (1987). Techniques for determining the ME content of poultry feeds. In: *Recent Advances in Animal Nutrition*. (Eds.) Haresign W. and Cole D. J. A. Butterworths, London, pp. 3-17.

Gaya, L.G., Ferraz, J. B. S., Rezende, F. M., Mourao, G. B., Mattos, E. C., Eler, J. P. and Michelan Filho, T. (2006). Heritability and genetic correlation estimates for performance and carcass and body composition traits in a male broiler line. *Poultry Science* **85:** 837-843.

GenStat executable, (2002). GenStat statistical software, Release 6.1. Lawes Agricultural Trust.

Gille, U., (2004). Analysis of Growth. http://www.uni-leipzig.de/~vetana/growthe.htm Last updated 30.03.2004, accessed 30.07.2008.

Goldspink, G. (1977). The growth of muscles. In: *Growth and Poultry Meat Production*. (Eds.) Boorman, K.N and Wilson, B.J. *Proceedings of the Twelfth Poultry Science Symposium, 22-24th ,*pp. 13-29

Gompertz, B. (1825). On the nature of the function expressive of the law of human mortality, and on a new method of determining the value of life contingencies. Phil Trans Roy Soc., **115:** 513-585.

Gous, R.M. (1986). Measurement of response in nutritional experiments. In: *Nutrient requirements of Poultry and Nutritional Research*. (Eds.) Fisher, C. and Boorman K.N. *British Poultry Science Symposium* Number Nineteen, Butterworths. pp 41-57

Gous, R.M., Emmans, G.C., Broadbent, L.A. and Fisher, C. (1990). Nutritional effects on the growth and fatness of broilers. *British Poultry Science* **31**: 495-505.

Gous, R.M., Pym, R.A.E., Mannion, P.F. and Wu, J.X. (1996). An evaluation of the parameters of the Gompertz growth equation that describe the growth of eight strains of broiler. *Proceedings of the Australian Poultry Science Symposium*, 1996. University of Sydney, Sydney, pp. 174-177.

Gous, R.M., Moran, E.T.Jr., Stilborn, H.R., Bradford, G.D. and Emmans, G.C. (1999). Evaluation of the parameters needed to describe of the overall growth, the chemical growth, and the growth of feathers and breast muscles of broilers. *Poultry Science* **78:** 812 - 821.

Gous, R.M. (2001). Modelling energy and amino acid requirements in order to optimise the feeding of commercial broilers. 2nd International Symposium on Avian Nutrition. Concordia, Brazil.

Grove, A. J., Newell, G. E. and Carthy, J. D. (1964). *Animal Biology*. University Tutorial Press, London.

Hakansson, J., Eriksson, S. and Svensson, S.A. (1978). Influence of feed energy level on chemical composition of tissues and on the energy and protein utilization by broiler chicks. Swedish University of Agricultural Sciences, Department of Animal Husbandry, Report 59, Uppsala.

Halevy, O., Yahav, S. and Rozenboim, I. (2006). Enhancement of meat production by environmental manipulations in embryo and young broilers. *World's Poultry Science Journal* **62:** 485-497.

Hancock, C.E., Bradford, G.D., Emmans, G.C. and Gous, R.M. (1995). The evaluation of the growth parameters of six strains of commercial broiler chickens. *British Poultry Science* **36:** 247-264.

Havenstein, G.B., Ferket, P.R. and Qureshi, M.A. (2003). Carcass composition and yield of 1957 versus 2001 broilers when fed representative 1957 and 2001 broiler diets. *Poultry Science* **82:** 1509-1518.

Hoffmann, I. (2005). Research and investment in poultry genetic resources - challenges and options for sustainable use. *World's Poultry Science Journal* **61:** 57-70.

Ibe, S.N. and Nwakalor, L.N. (1987). Growth parameters and conformation in broilers: Influence of genotype and management on isometry of growth. *Poultry Science* **66:** 1247-1251.

Kemp, C., Fisher, C. and Kenny, M. (2005). Genotype – nutrition interactions in broilers; response to balanced protein in two commercial strains. *Proceedings of the 15th European symposium on poultry nutrition*, Balatonfured, Hungary, pp. 54–56.

Kidd, M.T., Corzo, A., Hoehler, D., Kerr, B.J., Barber, S.J. and Branton, S.L. (2004). Threonine needs of broiler chickens with different growth rates. *Poultry Science* **83:** 1368-1375.

Laird, AK. (1996). Postnatal growth of birds and mammals. *Growth* **30:** 349-363.

Lemme, A., Wijtten, P.J., Van Wichen, J., Petri, A. and Langhout, D.J. (2006). Responses of male growing broilers to increasing levels of balanced protein offered as coarse mash or pellets of varying quality. *Poultry Science* **85:** 721-730.

Le Bihan-Duval, E., Mignon-Grasteau, S., Millet, N. and Beaumont, C. (1998). Genetic analysis of a selection experiment on increased body weight and breast muscle weight as well as on limited abdominal fat weight. *British Poultry Science* **39:** 346-353.

Le Bihan-Duval, E., Millet, N. and Remingnon, H. (1999). Broiler meat quality, effect of selection for increased carcass quality and estimates of genetic parameters. *Poultry Science* **78:** 822 - 826.

Le Bihan-Duval, E., Berri, C., Baeza, E., Millet, N. and Beaumont, C. (2001). Estimation of the genetic parameters of meat characteristics and of their genetic correlations with growth and body composition in an experimental broiler line. *Poultry Science* **80:** 839-843.

Le Bihan-Duval, E. (2004). Genetic variability within and between breeds of poultry technological meat quality. *World's Poultry Science Journal* **60:** 331-340.

Lindsay, H.A. (1992). Allometric relationships between the physical parts of broiler chickens. *M Sc Agric. Thesis*, University of Natal, South Africa.

Leclercq, B. (1983). The influence of dietary protein content on the performance of genetically lean or fat growing chickens. *British Poultry Science* **24:** 581-587.

Martin, P.A., Bradford, G.D. and Gous, R.M. (1994). A formal method of determining the dietary amino acid requirements of laying-type pullets during their growing period. *British Poultry Science* **35:** 709-724.

Moore, D.T., Ferket, P.R. and Mozdziak, P.E. (2005). The effect of early nutrition on satellite cell dynamics in the young turkey. *Poultry Science* **84:** 784-756.

Moss, F.P and Leblond, C.P. (1971). Satellite cells as the source of nuclei in muscles of growing rats. *The Anatomical Report* **170(4):** 421-435.

Noy, Y. and Sklan, D. (1997). Posthatch development in poultry. *Journal of Applied Poultry Research* **6:** 344-354.

Noy, Y. and Sklan, D. (1998). Yolk utilisation in the newly hatched poultry. *British Poultry Science* **39:** 446-451.

Noy, Y., Geyra, A. and Sklan, D. (2001). The effect of early feeding on growth and small intestinal development in the posthatch poultry. *Poultry Science*. **80:** 912-919.

Remignon, H., Gardahaut, M.F., Marche, G. and Ricard, F.H. (1995). Selection for rapid growth increases the number and the size of muscle fibres without changing their typing in chickens. *Journal of Muscle Research and Cell Motility* **16(2):** 95-102.

Ricklefs, R.E. (1985). Modification of growth and development of muscles of poultry. *Poultry Science* **64:** 1563-1576.

Schmidt-Nielsen, K. (1991). *Scaling: Why is animal size so important*? Cambridge University Press.

Schultz, E., Gibson, M.C. and Champion, T. (1978). Satellite cells are mitotically quiescent in mature mouse muscle: An EM and radioautographic study. *Journal of Experimental Zoology* **206:** 451–456.

Schultz, E. and McCormick, K.M. (1994). Skeletal muscle satellite cells. *Reviews of Physiology, Biochemistry and Pharmacology* **123:** 213–257.

Summers, J.D., Jackson, S. and Spratt, D. (1989). Weight gain and breast yield of large white male turkeys fed diets varying in protein content. *Poultry Science* **68:** 1547-1552.

Whitehead, C.C. and Griffin, H.D. (1986). Development of divergent lines of lean and fat broilers using plasma very low density lipoprotein concentration as selection criterion; results over the fourth generation and lack of effect of dietary fat on performance and carcase fat content. *British Poultry Science* **27:** 317-324.

Wilson, B.J. (1977). Growth Curves: their analysis and use. In: Growth and Poultry Meat Production. (Eds.) Boorman, K.N and Wilson, B.J. *Proceedings of the Twelfth Poultry Science Symposium, 22-24th,* pp.89-117.

Uni, Z. and Ferket, R.P. (2004). Methods for early nutrition and their potential. *World's Poultry Science Journal* **60:** 101-111.

Yablonka-Reuveni, Z. (2004). Isolation and characterization of stem cells from adult skeletal muscle. In: Handbook of Stem Cells. (Eds.) Lanza, R.P., Blau, H.B., Melton, D.A., Moore, M.A.S., Thomas, E.D., Verfaillie, C.M., Weissman, I.L. and West, M.D., Elsevier-Academic Press, San Diego **vol. 2** pp. 571–580.

Zerehdaran, S., Vereijken, A.L.J., van Arendonk, J.A.M., Bovenhuis, H. and van der Waaij, E.H. (2005). Broiler breeding strategies using indirect carcass measurements. *Poultry Science* **84:** 1214-1221.

Appendix 1.1 Analysis of variance for 6-week body weight

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	87746	87746	43873	15.71	0.000
Feed	3	357993	357993	119331	42.74	0.000
Sex	1	1705925	1705925	1705925	610.96	0.000
Strain*Feed	6	7683	7683	1280	0.46	0.831
Strain*Sex	2	6656	6656	3328	1.19	0.322
Feed*Sex	3	55485	55485	18495	6.62	0.002
Strain*Feed*Sex	6	17128	17128	2855	1.02	0.436
Block	1	107258	107258	107258	38.41	0.000
Error	23	64221	64221	2792		
Total	47	2410094				

Appendix 1.2 Analysis of variance for 6-week food intake

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	444596	444596	222298	10.74	0.001
Feed	3	251438	251438	83813	4.05	0.019
Sex	1	3375041	3375041	3375041	163.12	0.000
Strain*Feed	6	36799	36799	6133	0.30	0.932
Strain*Sex	2	21721	21721	10860	0.52	0.599
Feed*Sex	3	26503	26503	8834	0.43	0.736
Strain*Feed*Sex	6	77655	77655	12942	0.63	0.708
Block	1	392047	392047	392047	18.95	0.000
Error	23	475891	475891	20691		
Total	47	5101690				

Appendix 1.3 Analysis of variance for 6-week feed conversion efficiency

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	19764.9	19764.9	9882.4	50.10	0.000
Feed	3	9674.2	9674.2	3224.7	16.35	0.000
Sex	1	2745.2	2745.2	2745.2	13.92	0.001
Strain*Feed	6	946.0	946.0	157.7	0.80	0.580
Strain*Sex	2	450.1	450.1	225.1	1.14	0.337
Feed*Sex	3	1496.9	1496.9	499.0	2.53	0.082
Strain*Feed*Sex	6	992.0	992.0	165.3	0.84	0.553
Block	1	82.7	82.7	82.7	0.42	0.524
Error	23	4536.8	4536.8	197.3		
Total	47	40688.8				

Appendix 1.4 Analysis of variance for breast, over 6 week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	69659	69659	34829	26.56	0.000
Feed	3	139424	139424	46475	35.44	0.000
Sex	1	40379	40379	40379	30.79	0.000
Age	5	8567359	8567359	1713472	1306.62	0.000
Strain*Feed	6	2633	2633	439	0.33	0.919
Strain*Sex	2	4382	4382	2191	1.67	0.189
Strain*Age	10	26553	26553	2655	2.02	0.030
Feed*Sex	3	11868	11868	3956	3.02	0.030
Feed*Age	15	142036	142036	9469	7.22	0.000
Sex*Age	5	41751	41751	8350	6.37	0.000
Strain*Feed*Sex	6	3507	3507	585	0.45	0.848
Strain*Feed*Age	30	41133	41133	1371	1.05	0.403
Strain*Sex*Age	10	8328	8328	833	0.64	0.784
Feed*Sex*Age	15	24665	24665	1644	1.25	0.228
Strain*Feed*Sex*Age	30	31138	31138	1038	0.79	0.778
Error	432	566516	566516	1311		
Total	575	9721329				

Appendix 1.5 Analysis of variance for thigh, over 6 week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	424	424	212	1.66	0.192
Feed	3	1227	1227	409	3.20	0.023
Sex	1	10137	10137	10137	79.27	0.000
Age	5	1208662	1208662	241732	1890.18	0.000
Strain*Feed	6	743	743	124	0.97	0.446
Strain*Sex	2	231	231	116	0.90	0.406
Strain*Age	10	1367	1367	137	1.07	0.385
Feed*Sex	3	1058	1058	353	2.76	0.042
Feed*Age	15	5599	5599	373	2.92	0.000
Sex*Age	5	10305	10305	2061	16.12	0.000
Strain*Feed*Sex	6	974	974	162	1.27	0.270
Strain*Feed*Age	30	3539	3539	118	0.92	0.587
Strain*Sex*Age	10	758	758	76	0.59	0.820
Feed*Sex*Age	15	2722	2722	181	1.42	0.134
Strain*Feed*Sex*Age	30	4703	4703	157	1.23	0.195
Error	432	55248	55248	128		
Total	575	1307695				

Appendix 1.6 Analysis of variance for drum, over 6 week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	184.9	184.9	92.4	1.12	0.327
Feed	3	2803.9	2803.9	934.6	11.33	0.000
Sex	1	11535.7	11535.7	11535.7	139.80	0.000
Age	5	855420.8	855420.8	171084.2	2073.38	0.000
Strain*Feed	6	475.9	475.9	79.3	0.96	0.451
Strain*Sex	2	283.9	283.9	141.9	1.72	0.180
Strain*Age	10	1455.7	1455.7	145.6	1.76	0.065
Feed*Sex	3	552.0	552.0	184.0	2.23	0.084
Feed*Age	15	3916.7	3916.7	261.1	3.16	0.000
Sex*Age	5	9366.7	9366.7	1873.3	22.70	0.000
Strain*Feed*Sex	6	498.1	498.1	83.0	1.01	0.421
Strain*Feed*Age	30	2400.1	2400.1	80.0	0.97	0.515
Strain*Sex*Age	10	1002.1	1002.1	100.2	1.21	0.279
Feed*Sex*Age	15	882.5	882.5	58.8	0.71	0.772
Strain*Feed*Sex*Age	30	1942.2	1942.2	64.7	0.78	0.787
Error	432	35646.3	35646.3	82.5		
Total	575	928367.5				

Appendix 1.7 Analysis of variance for wing, over 6 week period.

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	7.1	7.1	3.5	0.08	0.920
Feed	3	1469.0	1469.0	489.7	11.55	0.000
Sex	1	3944.9	3944.9	3944.9	93.02	0.000
Age	5	520223.9	520223.9	104044.8	2453.35	0.000
Strain*Feed	6	435.8	435.8	72.6	1.71	0.116
Strain*Sex	2	262.1	262.1	131.0	3.09	0.047
Strain*Age	10	988.1	988.1	98.8	2.33	0.011
Feed*Sex	3	203.5	203.5	67.8	1.60	0.189
Feed*Age	15	1378.2	1378.2	91.9	2.17	0.007
Sex*Age	5	4350.5	4350.5	870.1	20.52	0.000
Strain*Feed*Sex	6	422.7	422.7	70.4	1.66	0.129
Strain*Feed*Age	30	1964.8	1964.8	65.5	1.54	0.035
Strain*Sex*Age	10	472.4	472.4	47.2	1.11	0.350
Feed*Sex*Age	15	924.2	924.2	61.6	1.45	0.119
Strain*Feed*Sex*Age	30	1392.5	1392.5	46.4	1.09	0.338
Error	432	18320.8	18320.8	42.4		
Total	575	556760.5				

Appendix 1.8 Analysis of variance for liver, over 6 week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	44.5	44.5	22.3	0.37	0.690
Feed	3	408.0	408.0	136.0	2.27	0.080
Sex	1	1418.1	1418.1	1418.1	23.62	0.000
Age	5	206116.1	206116.1	41223.2	686.56	0.000
Strain*Feed	6	264.9	264.9	44.1	0.74	0.621
Strain*Sex	2	340.8	340.8	170.4	2.84	0.060
Strain*Age	10	1238.5	1238.5	123.9	2.06	0.026
Feed*Sex	3	256.1	256.1	85.4	1.42	0.236
Feed*Age	15	3458.0	3458.0	230.5	3.84	0.000
Sex*Age	5	1594.6	1594.6	318.9	5.31	0.000
Strain*Feed*Sex	6	584.9	584.9	97.5	1.62	0.139
Strain*Feed*Age	30	1308.4	1308.4	43.6	0.73	0.856
Strain*Sex*Age	10	347.9	347.9	34.8	0.58	0.831
Feed*Sex*Age	15	667.8	667.8	44.5	0.74	0.742
Strain*Feed*Sex*Age	30	2600.7	2600.7	86.7	1.44	0.064
Error	432	25938.7	25938.7	60.0		
Total	575	246588.1				

Appendix 1.9 Analysis of variance for gut, over 6 week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	5135	5135	2567	4.27	0.015
Feed	3	22279	22279	7426	12.36	0.000
Sex	1	4472	4472	4472	7.44	0.007
Age	5	1497170	1497170	299434	498.16	0.000
Strain*Feed	6	5967	5967	995	1.65	0.131
Strain*Sex	2	1054	1054	527	0.88	0.417
Strain*Age	10	19079	19079	1908	3.17	0.001
Feed*Sex	3	1263	1263	421	0.70	0.552
Feed*Age	15	23111	23111	1541	2.56	0.001
Sex*Age	5	1311	1311	262	0.44	0.823
Strain*Feed*Sex	6	2932	2932	489	0.81	0.560
Strain*Feed*Age	30	17428	17428	581	0.97	0.520
Strain*Sex*Age	10	7455	7455	745	1.24	0.263
Feed*Sex*Age	15	14193	14193	946	1.57	0.077
Strain*Feed*Sex*Age	30	17701	17701	590	0.98	0.497
Error	432	259666	259666	601		
Total	575	1900215				

Appendix 1.10 Analysis of variance for featherweight, over 6 week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	2	5672	5672	2836	1.38	0.252
Feed	3	8538	8538	2846	1.39	0.245
Sex	1	0	0	0	0.00	0.990
Age	5	1064371	1064371	212874	103.93	0.000
Strain*Feed	6	11789	11789	1965	0.96	0.452
Strain*Sex	2	14252	14252	7126	3.48	0.032
Strain*Age	10	4792	4792	479	0.23	0.993
Feed*Sex	3	22875	22875	7625	3.72	0.012
Feed*Age	15	68799	68799	4587	2.24	0.005
Sex*Age	5	3479	3479	696	0.34	0.889
Strain*Feed*Sex	6	12638	12638	2106	1.03	0.406
Strain*Feed*Age	30	82616	82616	2754	1.34	0.109
Strain*Sex*Age	10	60424	60424	6042	2.95	0.001
Feed*Sex*Age	15	115590	115590	7706	3.76	0.000
Strain*Feed*Sex*Age	30	67303	67303	2243	1.10	0.336
Error	432	884841	884841	2048		
Total	575	2427978				

Live weight

Pen No	Block	Strain	Feed	Sex	Week 0 lwt/b	Week 1 lwt/32 b kg	Week 1 lwt/b	Week 2 lwt/32 b kg	Week 2 lwt/b	Week 3 lwt/16 b kg	Week 3 lwt/16 b kg	Week 3 lwt/b	Week 4 lwt/16 b kg	Week 4 lwt/16 b kg	Week 4 lwt/b	Week 5 lwt/16 b kg	Week 5 lwt/16 b kg	Week 5 lwt/b	Week 6 lwt/8 b kg	Week 6 lwt/8 b kg	Week 6 lwt/8 b kg	Week 6 lwt/8 b kg	Week 6 lwt/b
1	1	Ross 308	2	M	40.54	5.4	170.0	15.8	493.8	14.72	15.68	950.0	24.7	24.96	1551.9	34.06	33.34	2106	23.32	23.74	23.92	22.5	2921
2	1	Ross 308	1	F	39.71	5.4	168.8	14.86	464.4	14.26	14.26	891.3	21.68	22.94	1394.4	30.92	30.3	1913	20.76	19.16	19.22	19.3	2451
3	1	Ross788	2	M	41.2	5.4	168.8	14.92	466.3	15.66	15	958.1	24.32	23.72	1501.3	34.38	33.56	2123	23.54	22.66	23.42	22.22	2870
4	1	Cobb	3	F	44.46	5.9	185.0	16.18	505.6	14.62	15.5	941.3	23.58	24.2	1493.1	31.04	32.02	1971	20.74	20.56	19.42	20.66	2543
5	1	Cobb	2	M	45.53	6.1	190.6	16.62	519.4	17.56	16.9	1076.9	27.52	27.4	1716.3	36.52	37.38	2309	22.84	24.76	24.88	24.88	3043
6	1	Cobb	2	F	44.46	6.0	188.1	15.82	494.4	15.76	15.68	982.5	23.7	25	1521.9	31.9	32.42	2010	20.54	20.94	20.8	19.3	2549
7	1	Ross788	1	M	41.23	5.6	174.4	15.7	490.6	15.32	15.72	970.0	24.1	24.02	1503.8	33.9	32.94	2089	22.26	22.34	23.2	22	2806
8	1	Ross 308	4	F	39.71	4.9	154.4	13.15	410.9	13.06	13.78	838.8	21.14	21.62	1336.3	28.3	29.7	1813	17.66	19.78	19.2	19.24	2371
9	1	Cobb	1	M	45.53	6.1	190.0	17.6	550.0	17.12	16.74	1058.1	26.66	26.14	1650.0	34.16	32.9	2096	22.32	23.16	23.8	23.58	2902
10	1	Ross788	1	F	41.09	5.5	171.9	14.35	448.4	13.78	13.44	850.6	21.46	20.98	1326.3	29.04	28.34	1793	18.92	19.08	19.99	18.52	2391
11	1	Ross 308	1	M	40.54	5.8	180.0	15.4	481.3	15.64	15.6	976.3	24.62	24.14	1523.8	31.42	33.38	2025	23.96	22.36	22.76	22.66	2867
12	1	Cobb	4	F	44.46	5.6	173.8	14.7	459.4	14.94	14.56	921.9	22.12	22.26	1386.9	28.62	28.48	1784	19.02	19	18.54	20.1	2396
13	2	Ross 308	4	M	40.54	5.0	156.3	12.85	401.6	14.22	13.42	863.8	22.72	22.38	1409.4	31.96	27.96	1873	18.04	21.64	20.42	20.74	2526
14	2	Ross 308	4	F	39.71	4.9	153.8	12.6	393.8	12.94	12.28	788.1	20.5	19.4	1246.9	26.68	25.82	1641	17.66	18.22	17.98	17.18	2220
15	2	Ross788	4	M	41.23	4.8	150.6	12.8	400.0	13.16	12.24	793.8	20.62	20.82	1295.0	27.28	29.94	1788	19.26	20.4	18.5	19.7	2433
16	2	Ross788	1	F	41.09	5.5	171.9	14.65	457.8	14.34	15.08	919.4	22.5	22.52	1406.9	28.48	28.24	1773	18.98	19.36	19.06	18.86	2383
17	2	Ross 308	2	M	40.54	5.2	161.9	15.58	486.9	16.14	15.28	981.9	25.7	24.46	1567.5	32.86	31.2	2002	23	22.12	22.54	22.94	2831
18	2	Cobb	2	F	44.46	6.1	190.6	15.65	489.1	15.66	15.4	970.6	23.04	23.4	1451.3	32.28	29.54	1932	19.16	20.06	20.12	19.44	2462
19	2	Cobb	4	M	45.53	5.6	173.8	14.7	459.4	15.16	16.1	976.9	25.14	22.04	1474.4	27.84	29.82	1802	20.72	19.78	20.66	18.36	2485
20	2	Ross 308	3	F	40.54	5.3	164.4	14.25	445.3	13.46	13.96	856.9	22.1	21.96	1376.9	28.18	28.12	1759	19.16	19.22	17.74	18.94	2346
21	2	Ross788	2	M	41.23	5.3	164.4	14.85	464.1	15.26	15.22	952.5	24.16	24.62	1524.4	32.56	30.98	1986	23.2	23.04	22.22	22	2827
22	2	Ross788	3	F	41.09	4.9	153.1	13.5	421.9	13.46	13.38	838.8	21.98	20.8	1336.9	27.74	27.88	1738	18.82	19.42	18.26	19.7	2381
23	2	Ross 308	3	M	40.54	5.2	163.8	13.75	429.7	15.48	15.22	959.4	24.42	23.62	1501.3	31.8	31.56	1980	22.84	23.24	23.24	21.3	2832
24	2	Ross788	4	F	41.09	4.6	144.4	12.25	382.8	12.18	11.74	747.5	18.98	19.2	1193.1	26.04	26.44	1640	17.88	18.18	17.26	18.56	2246
25	2	Ross788	1	M	41.23	5.4	168.8	15.3	478.1	15.48	15.56	970.0	24.52	24.1	1519.4	32	31.96	1999	23.44	22.32	21.70	21.40	2777
26	2	Cobb	1	F	44.46	6.1	191.3	16.65	520.3	15.62	15.62	976.3	23.36	23.1	1451.9	29.26	29.34	1831	19.28	20.30	20.44	19.90	2498
27	2	Ross788	3	M	41.23	4.8	150.6	13.3	415.6	14.68	14.44	910.0	23.16	22.74	1434.4	31.56	32.24	1994	21.46	21.46	22.38	22.28	2737
28	2	Cobb	4	F	44.46	5.3	166.9	14.4	450.0	14.8	14.16	905.0	22.5	21.66	1380.0	27.42	27.38	1713	19.00	18.32	18.62	18.82	2336
29	2	Cobb	3	M	45.53	5.7	178.1	15.8	493.8	16.64	16.76	1043.8	25.78	25.22	1593.8	32.98	32.3	2040	21.90	23.50	22.44	21.78	2801
30	2	Ross788	2	F	41.09	5.3	164.4	14.05	439.1	14.1	14	878.1	21.76	21.84	1362.5	27.3	27.12	1701	19.20	18.80	19.22	18.40	2363
31	2	Ross 308	1	M	40.54	5.5	172.5	15.15	473.4	15.76	15.24	968.8	23.94	24.12	1501.9	32.34	32.16	2016	21.78	22.48	23.12	23.08	2827
32	2	Cobb	3	F	44.46	6.1	191.9	15.9	496.9	14.62	15.68	946.9	23.2	23.1	1446.9	29.88	28.82	1834	19.60	19.82	18.66	19.60	2428
33	2	Cobb	2	M	45.53	6.2	193.1	16.75	523.4	17.2	17.64	1088.8	26.32	26.88	1662.5	33.76	36.5	2196	24.40	24.10	24.12	23.94	3018
34	2	Ross 308	2	F	40.54	5.7	176.9	14.55	454.7	14.7	14.76	920.6	22.96	22.62	1424.4	28.8	29.9	1834	18.96	19.76	19.12	19.64	2421
35	2	Cobb	1	M	45.53	6.2	193.1	17.65	551.6	16.96	16.68	1051.3	25.58	24.8	1574.4	33.02	32.18	2038	22.28	23.70	22.28	22.28	2829
36	2	Ross 308	1	F	39.71	5.7	179.4	14.75	460.9	14.56	14.36	903.8	21.72	21.82	1360.6	27.6	28.22	1744	19.00	18.56	18.58	19.04	2349
37	1	Ross788	3	M	41.23	5.0	156.9	13.45	420.3	14.7	14.56	914.4	22.98	23.22	1443.8	31.86	32.72	2018	22.22	21.42	22.50	21.58	2741
38	1	Ross788	3	F	41.09	5.3	166.9	14	437.5	13.3	13.92	850.6	21.38	21.64	1344.4	28.5	28.84	1792	19.28	19.90	19.32	18.94	2420
39	1	Ross 308	3	M	40.54	5.3	166.3	13.1	409.4	14.76	14.2	905.0	24.56	23.8	1511.3	34.12	33.92	2126	21.74	22.44	22.72	23.30	2819
40	1	Cobb	1	F	44.46	6.5	201.9	16.75	523.4	16.2	16.26	1014.4	25.04	24.4	1545.0	31.52	30.98	1953	19.80	19.98	20.02	20.76	2518
41	1	Ross788	4	M	41.23	4.7	147.5	12.55	392.2	13.94	13.18	847.5	22.22	22.64	1401.9	32.28	31.06	1979	20.12	21.12	21.86	21.14	2633
42	1	Ross788	2	F	41.09	5.5	170.6	14.1	440.6	13.98	13.74	866.3	23.14	22.74	1433.8	30.18	30.52	1897	19.76	19.44	20.90	19.62	2491
43	1	Cobb	3	M	45.53	5.7	178.1	16	500.0	16.56	16.54	1034.4	27.32	26.24	1673.8	35.46	36.8	2258	23.40	24.38	24.06	24.22	3002
44	1	Ross788	4	F	41.09	4.8	150.6	13.85	432.8	12.92	12.84	805.0	21.2	21.26	1326.9	29.48	29.16	1833	18.40	19.08	19.18	19.88	2392
45	1	Ross 308	4	M	40.54	4.9	153.1	12.75	398.4	13.28	13.92	850.0	23.42	22.8	1444.4	32.14	31.4	1986	21.58	23.00	20.94	22.32	2745
46	1	Ross 308	3	F	39.71	5.2	163.1	14.05	439.1	14.08	13.94	875.6	22.68	22.68	1417.5	30.12	31.92	1939	20.08	19.30	20.00	20.72	2503
47	1	Cobb	4	M	45.53	5.3	164.4	15.15	473.4	15.18	15.4	955.6	23.62	26.02	1551.3	33.92	33.14	2096	23.36	20.90	21.68	21.82	2743
48	1	Ross 308	2	F	39.71	5.4	169.4	14.1	440.6	14.18	13.62	868.8	23.36	22.74	1440.6	29.88	29.78	1864	19.96	20.38	19.76	20.14	2508
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Pen No	Week 1 Adg 1	Week 2 Adg 2	Week 3 Adg 3	0-3 Adg 0-3	Adg 4	Adg 5	Adg 6	Adg 3-6	Adg 0-6
1	18.5	46.3	65.2	43.3	86.0	79.2	116.4	93.9	68.6
2	18.4	42.2	61.0	40.5	71.9	74.1	76.9	74.3	57.4
3	18.2	42.5	70.3	43.7	77.6	88.8	106.7	91.0	67.4
4	20.1	45.8	62.2	42.7	78.8	68.2	81.8	76.3	59.5
5	20.7	47.0	79.6	49.1	91.3	84.7	104.7	93.6	71.4
6	20.5	43.8	69.7	44.7	77.1	69.7	77.1	74.6	59.6
7	19.0	45.2	68.5	44.2	76.3	83.6	102.5	87.4	65.8
8	16.4	36.7	61.1	38.0	71.1	68.0	79.8	73.0	55.5
9	20.6	51.4	72.6	48.2	84.6	63.7	115.2	87.8	68.0
10	18.7	39.5	57.5	38.5	67.9	66.7	85.4	73.3	55.9
11	19.9	43.0	70.7	44.6	78.2	71.6	120.3	90.0	67.3
12	18.5	40.8	66.1	41.8	66.4	56.8	87.3	70.2	56.0
13	16.5	35.0	66.0	39.2	77.9	66.2	93.4	79.2	59.2
14	16.3	34.3	56.3	35.6	65.5	56.3	82.8	68.2	51.9
15	15.6	35.6	56.3	35.8	71.6	70.4	92.1	78.1	56.9
16	18.7	40.8	65.9	41.8	69.6	52.2	87.2	69.7	55.8
17	17.3	46.4	70.7	44.8	83.7	62.1	118.5	88.1	66.4
18	20.9	42.6	68.8	44.1	68.7	68.7	75.7	71.0	57.6
19	18.3	40.8	73.9	44.3	71.1	46.8	97.6	71.8	58.1
20	17.7	40.1	58.8	38.9	74.3	54.6	83.7	70.9	54.9
21	17.6	42.8	69.8	43.4	81.7	65.9	120.2	89.3	66.3
22	16.0	38.4	59.6	38.0	71.2	57.3	91.9	73.5	55.7
23	17.6	38.0	75.7	43.8	77.4	68.4	121.7	89.2	66.5
24	14.8	34.1	52.1	33.6	63.7	63.8	86.6	71.4	52.5
25	18.2	44.2	70.3	44.2	78.5	68.5	111.2	86.0	65.1
26	21.0	47.0	65.1	44.4	67.9	54.2	95.2	72.4	58.4
27	15.6	37.9	70.6	41.4	74.9	79.9	106.2	87.0	64.2
28	17.5	40.4	65.0	41.0	67.9	47.5	89.1	68.2	54.6
29	18.9	45.1	78.6	47.5	78.6	63.8	108.7	83.7	65.6
30	17.6	39.2	62.7	39.9	69.2	48.3	94.6	70.7	55.3
31	18.9	43.0	70.8	44.2	76.2	73.4	115.9	88.5	66.3
32	21.1	43.6	64.3	43.0	71.4	55.4	84.7	70.5	56.7
33	21.1	47.2	80.8	49.7	82.0	76.2	117.4	91.8	70.8
34	19.5	39.7	66.6	41.9	72.0	58.6	83.8	71.5	56.7
35	21.1	51.2	71.4	47.9	74.7	66.2	113.1	84.7	66.3
36	20.0	40.2	63.3	41.1	65.3	54.8	86.4	68.8	55.0
37	16.5	37.6	70.6	41.6	75.6	82.1	103.3	87.0	64.3
38	18.0	38.7	59.0	38.5	70.5	63.9	89.7	74.7	56.6
39	18.0	34.7	70.8	41.2	86.6	87.9	98.9	91.1	66.1
40	22.5	45.9	70.1	46.2	75.8	58.3	80.6	71.6	58.9
41	15.2	35.0	65.0	38.4	79.2	82.5	93.3	85.0	61.7
42	18.5	38.6	60.8	39.3	81.1	66.2	84.9	77.4	58.3
43	18.9	46.0	76.3	47.1	91.3	83.5	106.3	93.7	70.4
44	15.6	40.3	53.2	36.4	74.6	72.2	79.9	75.6	56.0
45	16.1	35.0	64.5	38.5	84.9	77.3	108.5	90.2	64.4
46	17.6	39.4	62.4	39.8	77.4	74.5	80.6	77.5	58.7
47	17.0	44.2	68.9	43.3	85.1	77.8	92.4	85.1	64.2
48	18.5	38.8	61.2	39.5	81.7	60.5	91.9	78.0	58.8

Pen No	Week 1 FI/b/d	Week 2 FI/b/d	Week 3 FI/b/d	0-3 FI/b/d	Week 1 FCE 1	Week 2 FCE 2	Week 3 FCE 3	0-3 FCE 0-3
1	18.5	48.9	94.5	53.9	999.14	946.4746	690.011	802.8059
2	18.7	47.8	84.2	50.2	987.1913	883.8409	724.5807	807.6631
3	18.5	50.5	98.3	55.8	984.1676	841.5141	714.8394	782.873
4	20.1	52.7	90.8	54.5	1000.878	869.9128	685.2302	783.412
5	19.7	59.4	102.0	60.3	1054.109	791.1422	780.847	813.9067
6	19.8	51.9	93.5	55.1	1037.501	843.332	745.5638	811.2281
7	17.7	43.6	91.9	51.1	1076.23	1036.386	745.0831	866.1912
8	19.4	45.5	83.6	49.5	844.1968	806.2705	730.6309	768.622
9	20.0	57.0	95.8	57.6	1031.929	902.0194	758.0474	837.2621
10	18.2	45.4	78.7	47.4	1024.753	870.3931	730.0057	812.5351
11	18.4	49.9	91.3	53.2	1083.485	862.0105	774.5811	837.5169
12	20.7	51.2	89.9	53.9	893.3666	797.199	735.3285	775.1163
13	18.6	48.6	86.3	51.1	891.0703	721.5074	765.3299	766.6601
14	18.4	42.8	77.7	46.3	886.839	801.1611	725.5114	770.1812
15	18.2	41.6	79.1	46.3	857.5196	855.5752	710.8772	773.4534
16	18.4	47.4	84.8	50.2	1015.593	861.0253	777.9143	833.1295
17	18.1	52.3	89.5	53.3	958.2707	886.9792	789.6887	840.5826
18	19.6	50.4	89.3	53.1	1063.813	845.09	770.5	830.2391
19	20.0	47.1	94.7	53.9	914.91	866.7063	780.9961	822.5158
20	19.5	48.2	81.6	49.8	909.0016	832.1757	720.5464	781.1766
21	17.7	52.1	87.2	52.3	995.3984	822.0553	800.4167	829.5569
22	17.9	44.4	80.4	47.6	894.7677	864.1076	740.2763	798.1708
23	19.0	47.0	90.3	52.1	926.7419	809.0047	837.8646	839.994
24	18.0	42.2	74.2	44.8	820.3141	807.8348	702.1933	751.1642
25	17.7	48.1	87.2	51.0	1030.762	919.6151	805.4168	867.3278
26	20.4	52.1	86.6	53.0	1030.105	902.5195	752.5402	837.2111
27	17.8	45.6	84.4	49.2	879.75	830.4665	837.023	840.1377
28	19.7	49.6	87.0	52.1	886.7082	815.3433	746.8291	786.2084
29	20.2	52.8	97.4	56.8	936.3668	853.7398	806.582	836.5959
30	17.8	46.0	82.1	48.7	987.1322	853.225	763.6891	819.2127
31	19.0	50.3	88.5	52.6	991.1159	855.1504	799.8912	840.5572
32	20.8	50.8	88.5	53.4	1010.563	858.0885	726.1668	805.0035
33	20.2	53.6	96.1	56.6	1045.714	880.143	840.5187	877.3834
34	20.9	46.3	87.9	51.7	931.6444	857.2926	757.53	810.7866
35	20.2	54.3	93.2	55.9	1041.314	942.8862	766.2825	856.6746
36	19.2	46.6	85.4	50.4	1037.85	863.2214	740.4516	816.0727
37	18.4	49.3	90.2	52.7	897.1328	762.8274	782.2553	789.5792
38	18.2	45.8	80.9	48.3	986.2688	843.343	729.3081	797.6553
39	23.8	47.1	86.3	52.4	753.1014	738.1627	820.3916	785.5725
40	21.7	52.2	91.3	55.1	1035.434	879.4218	768.181	838.4676
41	18.8	46.0	87.5	50.8	808.5761	759.7603	743.6433	756.5211
42	19.5	45.6	83.4	49.5	947.6508	845.3271	729.1584	793.5646
43	20.2	55.5	102.5	59.4	935.4862	828.8096	744.9357	792.6988
44	19.4	47.6	83.4	50.1	806.4282	847.4479	637.6433	725.802
45	20.7	46.8	87.6	51.7	775.6841	748.3737	736.3043	745.2086
46	21.0	48.5	86.7	52.1	839.2703	813.3661	718.94	764.4155
47	20.6	53.1	95.0	56.2	824.9804	831.2801	725.0101	770.6622
48	19.4	45.7	84.3	49.8	953.4191	848.8265	725.2631	792.686

Pen No	Block	Strain	Feed	Sex	FI-1/b/d	FI-2/b/d	FI-3/b/d	FI-0-3/b/d	FI-4/b/d	FI-5/b/d	FI-6/b/d	FI-3-6/b/d	FI-0-6/b/d	Adg 1	Adg 2	Adg 3	Adg 0-3	Adg 4	Adg 5	Adg 6	Adg 3-6	Adg 0-6	FCE-1	FCE-2
1	1	1	2	M	18.5	48.9	94.5	53.9	148.0	175.0	219.0	180.7	117.3	18.5	46.3	65.2	43.3	86.0	79.2	116.4	93.9	68.6	999	946
2	1	1	1	F	18.7	47.8	84.2	50.2	123.7	158.1	190.2	157.3	103.8	18.4	42.2	61.0	40.5	71.9	74.1	76.9	74.3	57.4	987	884
3	1	2	2	M	18.5	50.5	98.3	55.8	151.7	189.9	229.5	190.4	123.1	18.2	42.5	70.3	43.7	77.6	88.8	106.7	91.0	67.4	984	842
4	1	3	3	F	20.5	52.7	90.8	54.5	130.0	149.7	159.2	146.3	100.5	20.1	45.8	62.2	42.7	78.8	68.2	81.8	76.3	59.5	981	870
5	1	3	2	M	20.8	59.4	102.0	60.3	124.7	168.0	197.1	163.3	112.0	20.7	47.0	79.6	49.1	91.3	84.7	104.7	93.6	71.4	995	791
6	1	3	2	F	20.6	51.9	93.5	55.1	132.0	148.8	173.4	151.4	103.4	20.5	43.8	69.7	44.7	77.1	69.7	77.1	74.6	59.6	997	843
7	1	2	1	M	20.2	46.7	91.9	52.9	131.8	162.7	204.6	166.4	109.7	19.0	45.2	68.5	44.2	76.3	83.6	102.5	87.4	65.8	942	967
8	1	1	4	F	19.4	45.5	83.6	49.5	128.6	158.9	184.9	157.4	103.5	16.4	36.7	61.1	38.0	71.1	68.0	79.8	73.0	55.5	844	806
9	1	3	1	M	20.4	57.0	95.8	57.6	142.0	148.0	189.6	159.9	108.8	20.6	51.4	72.6	48.2	84.6	63.7	115.2	87.8	68.0	1032	902
10	1	2	1	F	18.2	45.4	78.7	47.4	118.4	138.2	172.8	143.1	95.3	18.7	39.5	57.5	38.5	67.9	66.7	85.4	73.3	55.9	1024	870
11	1	1	1	M	19.4	49.9	91.3	53.2	133.9	174.0	217.1	175.0	114.3	19.9	43.0	70.7	44.6	78.2	71.6	120.3	90.0	67.3	1027	862
12	1	3	4	F	20.7	51.2	89.9	53.9	128.0	137.2	166.4	143.9	98.9	18.5	40.8	66.1	41.8	66.4	56.8	87.3	70.2	56.0	893	797
13	2	1	4	M	18.6	48.6	86.3	51.1	145.8	176.0	208.0	176.6	113.9	16.5	35.0	66.0	39.2	77.9	66.2	93.4	79.2	59.2	891	722
14	2	1	4	F	18.4	42.8	77.7	46.3	115.6	139.5	179.7	144.9	95.6	16.3	34.3	56.3	35.6	65.5	56.3	82.8	68.2	51.9	887	801
15	2	2	4	M	18.2	41.6	79.1	46.3	126.8	158.4	196.5	160.5	103.4	15.6	35.6	56.3	35.8	71.6	70.4	92.1	78.1	56.9	858	856
16	2	2	1	F	18.4	47.4	84.8	50.2	124.7	140.2	178.3	147.7	99.0	18.7	40.8	65.9	41.8	69.6	52.2	87.2	69.7	55.8	1016	861
17	2	1	2	M	18.1	52.3	89.5	53.3	142.8	192.4	221.0	185.4	119.4	17.3	46.4	70.7	44.8	83.7	62.1	118.5	88.1	66.4	958	887
18	2	3	2	F	20.4	50.4	89.3	53.1	119.9	127.5	160.4	136.0	94.7	20.9	42.6	68.8	44.1	68.7	68.7	75.7	71.0	57.6	1022	845
19	2	3	4	M	20.0	47.1	94.7	53.9	128.1	147.7	172.8	149.5	101.7	18.3	40.8	73.9	44.3	71.1	46.8	97.6	71.8	58.1	915	867
20	2	1	3	F	19.5	48.2	81.6	49.8	124.3	148.1	180.9	151.1	100.4	17.7	40.1	58.8	38.9	74.3	54.6	83.7	70.9	54.9	909	832
21	2	2	2	M	17.7	52.1	87.2	52.3	132.7	169.9	214.8	172.5	112.4	17.6	42.8	69.8	43.4	81.7	65.9	120.2	89.3	66.3	995	822
22	2	2	3	F	19.8	47.3	82.3	49.8	125.3	147.7	188.8	153.9	101.8	16.0	38.4	59.6	38.0	71.2	57.3	91.9	73.5	55.7	808	812
23	2	1	3	M	19.0	47.0	90.3	52.1	143.1	175.4	220.3	179.6	115.8	17.6	38.0	75.7	43.8	77.4	68.4	121.7	89.2	66.5	927	809
24	2	2	4	F	18.0	42.2	74.2	44.8	116.6	144.9	173.4	145.0	94.9	14.8	34.1	52.1	33.6	63.7	63.8	86.6	71.4	52.5	820	808
25	2	2	1	M	18.0	48.1	90.2	52.1	131.0	156.5	262.8	183.4	117.8	18.2	44.2	70.3	44.2	78.5	68.5	111.2	86.0	65.1	1013	920
26	2	3	1	F	20.7	52.1	86.6	53.0	121.3	116.3	170.5	136.1	94.6	21.0	47.0	65.1	44.4	67.9	54.2	95.2	72.4	58.4	1015	903
27	2	2	3	M	17.8	45.6	84.4	49.2	134.5	167.5	207.6	169.9	109.6	15.6	37.9	70.6	41.4	74.9	79.9	106.2	87.0	64.2	880	830
28	2	3	4	F	19.7	49.6	87.0	52.1	126.7	128.4	159.2	138.1	95.1	17.5	40.4	65.0	41.0	67.9	47.5	89.1	68.2	54.6	887	815
29	2	3	3	M	20.2	52.8	97.4	56.8	137.6	145.4	180.9	154.6	105.7	18.9	45.1	78.6	47.5	78.6	63.8	108.7	83.7	65.6	936	854
30	2	2	2	F	17.8	46.0	82.1	48.7	120.2	142.7	183.3	148.7	98.7	17.6	39.2	62.7	39.9	69.2	48.3	94.6	70.7	55.3	987	853
31	2	1	1	M	19.0	50.3	88.5	52.6	138.2	166.3	203.7	169.4	111.0	18.9	43.0	70.8	44.2	76.2	73.4	115.9	88.5	66.3	991	855
32	2	3	3	F	20.8	50.8	88.5	53.4	120.7	120.9	172.4	138.0	95.7	21.1	43.6	64.3	43.0	71.4	55.4	84.7	70.5	56.7	1011	858
33	2	3	2	M	20.5	53.6	96.1	56.6	137.7	146.7	200.5	161.6	109.2	21.1	47.2	80.8	49.7	82.0	76.2	117.4	91.8	70.8	1030	880
34	2	1	2	F	20.9	46.3	87.9	51.7	126.5	151.0	185.0	154.2	102.9	19.5	39.7	66.6	41.9	72.0	58.6	83.8	71.5	56.7	932	857
35	2	3	1	M	20.8	54.3	93.2	55.9	141.1	149.0	180.8	157.0	106.5	21.1	51.2	75.8	49.4	74.7	66.2	113.1	84.7	66.3	1015	943
36	2	1	1	F	19.7	46.6	85.4	50.4	119.2	138.6	172.4	143.4	97.0	20.0	40.2	63.3	41.1	65.3	54.8	86.4	68.8	55.0	1011	863
37	1	2	3	M	18.4	49.3	90.2	52.7	141.3	169.8	204.9	172.0	112.3	16.5	37.6	70.6	41.6	75.6	82.1	103.3	87.0	64.3	897	763
38	1	2	3	F	20.3	45.8	81.6	49.2	122.6	144.8	188.7	152.0	100.6	18.0	38.7	59.0	38.5	70.5	63.9	89.7	74.7	56.6	885	843
39	1	1	3	M	23.8	47.1	86.3	52.4	144.3	177.1	217.3	179.6	116.0	18.0	34.7	70.8	41.2	86.6	87.9	98.9	91.1	66.1	753	738
40	1	3	1	F	22.5	52.2	89.9	54.9	124.4	133.8	165.7	141.3	98.1	22.5	45.9	70.1	46.2	75.8	58.3	80.6	71.6	58.9	999	879
41	1	2	4	M	18.8	46.0	87.5	50.8	147.2	179.7	210.4	179.1	114.9	15.2	35.0	65.0	38.4	79.2	82.5	93.3	85.0	61.7	809	760
42	1	2	2	F	19.5	45.6	83.4	49.5	127.8	155.0	198.7	160.5	105.0	18.5	38.6	60.8	39.3	81.1	66.2	84.9	77.4	58.3	948	845
43	1	3	3	M	20.2	55.5	102.5	59.4	152.1	172.2	191.8	172.1	115.7	18.9	46.0	76.3	47.1	91.3	83.5	106.3	93.7	70.4	935	829
44	1	2	4	F	19.4	47.6	83.4	50.1	131.0	159.8	181.3	157.4	103.7	15.6	40.3	53.2	36.4	74.6	72.2	79.9	75.6	56.0	806	847
45	1	1	4	M	20.7	46.8	87.6	51.7	153.6	189.6	207.6	183.6	117.7	16.1	35.0	64.5	38.5	84.9	77.3	108.5	90.2	64.4	776	748
46	1	1	3	F	21.0	48.5	86.7	52.1	137.0	162.0	195.3	164.8	108.4	17.6	39.4	62.4	39.8	77.4	74.5	80.6	77.5	58.7	839	813
47	1	3	4	M	20.6	53.1	95.0	56.2	137.1	168.5	193.0	166.2	111.2	17.0	44.2	68.9	43.3	85.1	77.8	92.4	85.1	64.2	825	831
48	1	1	2	F	19.4	45.7	84.3	49.8	130.6	153.8	199.7	161.4	105.6	18.5	38.8	61.2	39.5	81.7	60.5	91.9	78.0	58.8	953	849

FCE-3	FCE-0-3	FCE-4	FCE-5	FCE-6	FCE-3-6	FCE-0-6	Strain	Pr 0-3	Pr0-3^2	PrI0-3	Pr0-3^2	Pr3-6	Pr3-6^2	PrI3-6	PrI3-6^2	Pr0-6	Pr0-6^2	PrI0-6	PrI0-6^2	Sex	FI-0-3/b/d
690	803	581	469	532	520	585	1	228.7	52304	12	152	173.9	30241	31	987	201.3	40522	24	555	M	53.9
725	808	581	485	404	472	553	1	245.2	60123	12	152	186.7	34857	29	844	216.0	46656	22	494	F	50.2
715	783	511	468	465	478	547	2	228.7	52304	13	163	173.9	30241	33	1096	201.3	40522	25	614	M	55.8
685	783	607	456	514	522	592	3	211.7	44817	12	133	160.6	25792	23	552	186.2	34670	19	350	F	54.5
781	814	732	504	531	573	637	3	228.7	52304	14	190	173.9	30241	28	809	201.3	40522	23	508	M	60.3
746	811	584	469	444	493	577	3	228.7	52304	13	159	173.9	30241	26	693	201.3	40522	21	433	F	55.1
745	835	578	514	501	526	600	2	245.2	60123	13	163	186.7	34857	31	965	216.0	46656	24	555	M	52.0
731	769	553	428	432	464	537	1	195.2	38103	10	93	147.8	21845	23	541	171.5	29412	18	315	F	49.5
758	837	595	430	607	549	625	3	245.2	60123	14	199	186.7	34857	30	881	216.0	46656	24	552	M	57.6
730	812	574	483	494	512	587	2	245.2	60123	12	135	186.7	34857	27	714	216.0	46656	21	424	F	47.4
775	838	606	412	554	514	589	1	245.2	60123	13	170	186.7	34857	33	1067	216.0	46656	25	612	M	53.2
735	775	519	414	525	488	566	3	195.2	38103	11	111	147.8	21845	21	452	171.5	29412	17	288	F	53.9
765	767	535	376	449	448	520	1	195.2	38103	10	100	147.8	21845	26	681	171.5	29412	20	381	M	51.1
726	770	567	403	461	470	543	1	195.2	38103	9	82	147.8	21845	21	459	171.5	29412	16	269	F	46.3
711	773	565	445	469	486	551	2	195.2	38103	9	82	147.8	21845	24	563	171.5	29412	18	315	M	46.3
778	833	569	379	489	472	563	2	245.2	60123	12	152	186.7	34857	28	760	216.0	46656	21	457	F	50.2
790	813	617	323	536	475	557	1	228.7	52304	12	149	173.9	30241	32	1039	201.3	40522	24	577	M	53.3
771	830	573	538	472	522	608	3	228.7	52304	12	148	173.9	30241	24	559	201.3	40522	19	363	F	53.1
781	823	555	317	565	480	571	3	195.2	38103	11	111	147.8	21845	22	489	171.5	29412	17	304	M	53.9
721	781	598	369	463	469	546	1	211.7	44817	11	111	160.6	25792	24	589	186.2	34670	19	350	F	49.8
800	830	616	388	560	518	590	2	228.7	52304	12	143	173.9	30241	30	899	201.3	40522	23	512	M	52.3
724	763	568	388	487	477	547	2	211.7	44817	11	111	160.6	25792	25	611	186.2	34670	19	352	F	49.8
838	840	541	390	552	496	574	1	211.7	44817	11	122	160.6	25792	29	832	186.2	34670	22	465	M	52.1
702	751	546	440	499	492	553	2	195.2	38103	9	76	147.8	21845	21	459	171.5	29412	16	265	F	44.8
779	849	599	438	423	469	553	2	245.2	60123	13	156	186.7	34857	34	1173	216.0	46656	25	642	M	51.0
753	837	560	351	558	532	618	3	245.2	60123	13	169	186.7	34857	25	645	216.0	46656	20	417	F	53.0
837	840	557	477	511	512	586	2	211.7	44817	10	109	160.6	25792	27	744	186.2	34670	20	416	M	49.2
747	786	535	370	560	493	574	3	195.2	38103	10	104	147.8	21845	20	417	171.5	29412	16	266	F	52.1
807	837	571	438	601	541	620	3	211.7	44817	12	145	160.6	25792	25	617	186.2	34670	20	388	M	56.8
764	819	576	338	516	475	560	2	228.7	52304	11	124	173.9	30241	26	669	201.3	40522	20	395	F	48.7
800	841	571	455	569	522	598	1	245.2	60123	13	166	186.7	34857	32	1000	216.0	46656	24	575	M	52.6
726	805	592	458	491	511	593	3	211.7	44817	11	128	160.6	25792	22	491	186.2	34670	18	318	F	53.4
841	877	595	519	586	568	648	3	228.7	52304	13	168	173.9	30241	28	790	201.3	40522	22	483	M	56.6
758	811	569	388	453	463	551	1	228.7	52304	12	140	173.9	30241	27	719	201.3	40522	21	429	F	51.7
814	883	594	472	626	539	622	3	245.2	60123	14	188	186.7	34857	29	859	216.0	46656	23	529	M	55.9
740	816	548	396	501	480	567	1	245.2	60123	12	153	186.7	34857	27	717	216.0	46656	21	439	F	50.4
782	790	535	483	504	506	572	2	211.7	44817	11	124	160.6	25792	28	763	186.2	34670	21	437	M	52.7
724	783	575	442	476	492	563	2	211.7	44817	10	105	160.6	25792	24	596	186.2	34670	19	348	F	48.3
820	786	600	496	455	508	570	1	211.7	44817	11	123	160.6	25792	29	832	186.2	34670	22	466	M	52.4
780	841	610	436	486	507	600	3	245.2	60123	13	181	186.7	34857	26	696	216.0	46656	21	451	F	54.9
744	757	538	459	444	475	537	2	195.2	38103	10	98	147.8	21845	26	701	171.5	29412	20	388	M	50.8
729	794	635	427	427	482	556	2	228.7	52304	11	128	173.9	30241	28	779	201.3	40522	21	447	F	49.5
745	793	601	485	554	545	608	3	211.7	44817	13	158	160.6	25792	28	764	186.2	34670	22	464	M	59.4
638	726	569	452	441	480	539	2	195.2	38103	10	96	147.8	21845	23	541	171.5	29412	18	317	F	50.1
736	745	553	408	523	491	547	1	195.2	38103	10	102	147.8	21845	27	736	171.5	29412	20	407	M	51.7
719	764	565	460	413	470	541	1	211.7	44817	11	122	160.6	25792	26	700	186.2	34670	20	408	F	52.1
725	771	620	461	479	512	577	3	195.2	38103	11	120	147.8	21845	25	604	171.5	29412	19	364	M	56.2
725	793	625	394	460	484	556	1	228.7	52304	11	130	173.9	30241	28	788	201.3	40522	21	452	F	49.8

FI-3-6/b/d	FI-0-6/b/d	Adg 0-3	Adg 3-6	Adg 0-6	FCE-0-3	FCE-3-6	FCE-0-6
180.7	117.0	43.3	93.7	68.6	803.0	518.6	584.8
155.6	102.9	40.5	74.3	57.4	807.7	477.5	558.1
190.4	123.1	43.7	91.0	67.4	782.9	478.2	547.3
146.3	100.5	42.7	76.3	59.5	783.4	521.5	592.2
163.6	112.0	49.1	93.6	71.4	813.9	573.3	637.5
151.4	103.4	44.7	74.6	59.6	811.2	492.8	577.0
166.4	109.0	44.2	87.4	65.8	835.5	525.5	603.7
157.4	103.5	38.0	73.0	55.5	768.6	463.5	536.5
159.0	108.8	48.2	87.8	68.0	837.3	549.2	625.0
143.1	95.3	38.5	73.3	55.9	812.4	512.1	586.6
175.0	114.5	44.6	90.0	67.3	837.5	514.5	589.0
143.9	98.9	41.8	70.2	56.0	775.1	487.8	566.1
176.6	113.9	39.2	79.2	59.2	766.7	448.3	519.8
144.9	95.6	35.6	68.2	51.9	770.2	470.5	543.0
160.5	103.4	35.8	78.1	56.9	773.5	486.2	550.6
147.7	99.0	41.8	69.7	55.8	833.1	471.8	563.8
185.4	119.4	44.8	88.1	66.4	813.0	475.2	556.3
136.0	94.7	44.1	71.0	57.6	830.2	522.3	608.0
149.5	101.7	44.3	71.8	58.1	822.5	480.2	570.9
151.1	100.4	38.9	70.9	54.9	781.2	469.2	546.5
172.5	112.4	43.4	89.3	66.3	829.6	517.5	590.2
153.9	100.7	38.0	73.5	55.7	763.0	477.3	553.1
179.6	115.8	43.8	89.2	66.5	840.0	496.5	573.7
145.0	94.9	33.6	71.4	52.5	751.2	492.2	553.3
183.4	117.3	44.2	86.0	65.1	849.2	469.0	555.4
136.1	94.6	44.4	72.4	58.4	837.2	532.4	617.5
169.9	109.6	41.4	87.0	64.2	840.1	512.1	585.8
138.1	95.1	41.0	68.2	54.6	786.2	493.4	573.6
154.6	105.7	47.5	83.7	65.6	836.6	541.0	620.4
148.7	98.7	39.9	70.7	55.3	819.2	475.4	560.2
169.4	111.0	44.2	88.5	66.3	840.6	522.3	597.7
138.0	95.7	43.0	70.5	56.7	805.0	510.8	592.9
161.6	109.2	49.7	91.8	70.8	877.4	567.9	648.5
154.2	102.9	41.9	71.5	56.7	810.8	463.4	550.6
157.0	106.5	49.4	84.7	66.3	883.3	539.6	622.4
143.4	97.0	41.1	68.8	55.0	816.1	480.1	567.0
172.0	112.3	41.6	87.0	64.3	789.6	505.8	572.3
152.0	100.2	38.5	74.7	56.6	783.0	491.5	565.4
179.6	116.0	41.2	91.1	66.1	785.6	507.5	570.3
141.3	98.3	46.2	71.6	58.9	841.0	506.7	600.4
179.1	114.9	38.4	85.0	61.7	756.5	474.6	536.8
160.5	105.0	39.3	77.4	58.3	793.6	482.2	555.6
172.1	115.7	47.1	93.7	70.4	792.7	544.5	608.2
157.4	103.7	36.4	75.6	56.0	725.8	480.2	539.5
183.6	117.7	38.5	90.2	64.4	745.2	491.5	547.3
164.8	108.4	39.8	77.5	58.7	764.4	470.3	540.9
166.2	111.2	43.3	85.1	64.2	770.7	511.9	577.3
161.4	105.6	39.5	78.0	58.8	792.7	483.5	556.4

Pen No	Block	Strain	Feed	Sex	week1	Week2	Week3	Week4	Week5	Week6	Week0-3	Week3-6	Week0-6
1	1	1	2	M	0.00	0.00	1.52	0.00	1.64	1.89	0.4902	1.1299	0.7874
2	1	1	1	F	0.00	2.94	1.56	0.00	0.00	1.92	1.4851	0.5814	1.0695
3	1	2	2	M	0.00	0.00	1.52	0.00	0.00	0.00	0.4902	0.0042	0.2618
4	1	3	3	F	0.00	0.00	0.00	1.52	1.59	3.70	0.0036	2.1858	1.0178
5	1	3	2	M	2.90	0.00	0.00	1.64	1.72	0.00	1.0152	1.1834	1.0929
6	1	3	2	F	0.00	0.00	0.00	0.00	0.00	0.00	0.0036	0.0040	0.0038
7	1	2	1	M	0.00	0.00	3.03	0.00	3.33	0.00	0.9804	1.1561	1.0610
8	1	1	4	F	1.43	0.00	0.00	0.00	0.00	0.00	0.4950	0.0042	0.2632
9	1	3	1	M	0.00	0.00	0.00	0.00	4.92	0.00	0.0037	1.7143	0.7979
10	1	2	1	F	1.43	1.49	0.00	1.61	0.00	0.00	0.9950	0.5814	0.8043
11	1	1	1	M	2.82	1.49	1.56	4.92	0.00	0.00	1.9802	1.8072	1.9022
12	1	3	4	F	0.00	0.00	0.00	0.00	4.69	0.00	0.0036	1.6304	0.7614
13	2	1	4	M	2.86	0.00	0.00	0.00	10.00	0.00	1.0000	3.5294	2.1622
14	2	1	4	F	0.00	0.00	0.00	0.00	0.00	0.00	0.0036	0.0037	0.0039
15	2	2	4	M	0.00	0.00	1.52	0.00	3.28	0.00	0.4902	1.1364	0.7895
16	2	2	1	F	1.43	0.00	1.54	0.00	1.67	0.00	0.9901	0.5780	0.8000
17	2	1	2	M	1.43	4.48	1.61	1.69	26.79	0.00	2.5126	10.3896	5.9490
18	2	3	2	F	2.70	0.00	0.00	0.00	4.69	0.00	0.9434	1.6393	1.2658
19	2	3	4	M	0.00	0.00	0.00	0.00	19.67	0.00	0.0037	7.0175	3.2258
20	2	1	3	F	0.00	1.49	1.56	0.00	10.17	0.00	1.0000	3.5928	2.1798
21	2	2	2	M	0.00	0.00	1.52	1.59	21.67	0.00	0.4902	8.4337	4.0541
22	2	2	3	F	0.00	0.00	0.00	0.00	17.46	0.00	0.0036	6.1798	2.8571
23	2	1	3	M	1.43	1.49	0.00	1.61	18.64	0.00	0.9950	7.1856	3.8043
24	2	2	4	F	0.00	0.00	0.00	0.00	1.72	1.96	0.0039	1.1834	0.5540
25	2	2	1	M	0.00	2.94	1.56	0.00	5.08	0.00	1.4851	1.7857	1.6216
26	2	3	1	F	0.00	1.43	1.49	0.00	9.68	2.00	0.9569	3.9773	2.3377
27	2	2	3	M	0.00	1.49	3.13	0.00	12.07	0.00	1.5000	4.2169	2.7322
28	2	3	4	F	0.00	2.86	0.00	0.00	3.23	0.00	0.9615	1.1111	1.0309
29	2	3	3	M	1.45	0.00	1.56	1.64	17.24	0.00	1.0050	6.7901	3.6011
30	2	2	2	F	1.43	0.00	0.00	1.59	3.33	0.00	0.4950	1.7241	1.0638
31	2	1	1	M	0.00	0.00	4.55	1.64	1.72	4.00	1.4706	2.3669	1.8767
32	2	3	3	F	1.39	2.90	0.00	1.59	6.67	0.00	1.4563	2.9240	2.1220
33	2	3	2	M	0.00	0.00	0.00	1.56	24.59	0.00	0.0037	9.6386	4.3243
34	2	1	2	F	0.00	0.00	0.00	0.00	14.29	3.92	0.0036	6.1453	2.8497
35	2	3	1	M	0.00	0.00	1.54	0.00	10.00	0.00	0.4975	3.5088	1.8817
36	2	1	1	F	0.00	0.00	0.00	0.00	1.61	0.00	0.0037	0.5556	0.2604
37	1	2	3	M	1.45	1.52	0.00	0.00	5.08	0.00	1.0101	1.7647	1.3587
38	1	2	3	F	0.00	0.00	0.00	0.00	1.64	0.00	0.0037	0.5650	0.2646
39	1	1	3	M	0.00	0.00	1.64	0.00	0.00	0.00	0.5291	0.0046	0.2841
40	1	3	1	F	1.39	0.00	2.99	0.00	0.00	0.00	1.4423	0.0036	0.7772
41	1	2	4	M	0.00	0.00	0.00	0.00	0.00	0.00	0.0037	0.0041	0.0039
42	1	2	2	F	1.43	0.00	1.54	0.00	0.00	0.00	0.9901	0.0043	0.5319
43	1	3	3	M	0.00	0.00	3.08	1.64	0.00	1.96	0.9950	1.1765	1.0782
44	1	2	4	F	1.43	0.00	0.00	0.00	0.00	0.00	0.4950	0.0042	0.2632
45	1	1	4	M	0.00	0.00	1.52	0.00	1.64	7.41	0.4902	2.8090	1.5707
46	1	1	3	F	1.43	0.00	0.00	0.00	0.00	0.00	0.4950	0.0042	0.2632
47	1	3	4	M	0.00	0.00	0.00	0.00	0.00	0.00	0.0037	0.0042	0.0040
48	1	1	2	F	0.00	0.00	0.00	0.00	0.00	0.00	0.0037	0.0042	0.0039

Age	Pen	Code	Strain	Feed	Sex	Weight	-Feath	Breast	Thighs	Drums	Wings	Liver	Gut	Remain	feathers
1			C		F	56	56	0.5	5.0	5.0	1.5	1.0	13	28	0.0
1			C		F	47	47	0.5	3.5	4.0	2.0	1.0	11.5	20.5	0.0
1			C		F	46	46	0.5	4.0	3.0	2.0	1.0	8.5	25	0.0
1			C		F	47	47	0.5	3.5	4.0	2.0	1.0	11.5	24.5	0.0
1			C		F	47	47	0.5	3.5	3.5	2.0	1.5	11	24.5	0.0
1			C		F	48	48	0.5	3.0	3.5	1.5	1.0	12.5	22.5	0.0
1			C		M	45	45	1.0	3.0	3.5	2.0	1.5	11.5	23	0.0
1			C		M	45	45	0.5	3.0	5.0	1.5	1.0	9	24	0.0
1			C		M	44	44	0.5	4.0	3.5	2.0	1.0	10.5	23.5	0.0
1			C		M	45	45	0.5	3.5	4.0	1.5	1.5	8	24	0.0
1			C		M	45	45	0.5	4.5	3.0	1.5	1.0	9	23.5	0.0
1			C		M	44	44	0.4	3.5	4.0	2.0	1.5	9.5	23	0.0
1			R 3		F	48	48	0.5	4.5	3.5	2.0	1.0	11	24.5	0.0
1			R 3		F	44	44	0.5	3.5	3.0	2.0	1.0	9.5	23	0.0
1			R 3		F	49	49	0.5	4.5	3.5	2.0	1.0	10.5	26.5	0.0
1			R 3		F	47	47	0.5	3.5	4.0	1.5	1.0	9	26	0.0
1			R 3		F	48	48	0.5	4.7	4.4	2.6	1.4	7.5	26.2	0.0
1			R 3		F	40	40	0.5	3.1	3.7	1.5	1.1	6.7	19.4	0.0
1			R 3		M	48	48	0.7	3.9	3.8	2.2	1.0	9.1	26.8	0.0
1			R 3		M	40	40	0.6	3.8	3.2	2.0	0.8	7	20.2	0.0
1			R 3		M	41	41	0.5	3.2	3.7	1.7	0.7	8.1	23.3	0.0
1			R 3		M	41	41	0.8	4.4	3.6	2.5	1.1	7.4	21	0.0
1			R 3		M	41	41	0.4	2.8	3.8	1.4	1.1	8.3	23	0.0
1			R 3		M	41	41	0.5	3.7	3.4	2.0	1.1	7	22.2	0.0
1			R 7		F	41	41	0.5	3.3	3.3	1.6	0.9	8.5	21.9	0.0
1			R 7		F	47	47	0.4	3.5	3.9	2.7	1.1	12.9	21.9	0.0
1			R 7		F	38	38	0.4	2.7	3.1	1.6	0.7	7.1	21.7	0.0
1			R 7		F	40	40	0.4	3.9	3.2	2.5	1.0	7.7	20	0.0
1			R 7		F	52	52	0.5	3.1	4.3	2.0	1.3	12.8	26.4	0.0
1			R 7		F	38	38	0.4	3.7	2.6	1.6	1.0	7.1	19.3	0.0
1			R 7		M	45	45	0.5	4.4	3.2	1.6	1.3	7.8	25.5	0.0
1			R 7		M	38	38	0.5	2.4	3.2	1.9	1.0	9	19.8	0.0
1			R 7		M	45	45	0.6	3.8	3.6	1.5	0.5	10	24.1	0.0
1			R 7		M	42	42	0.4	3.3	3.8	2.1	1.1	7.8	21.1	0.0
1			R 7		M	44	44	0.5	3.7	3.8	1.8	1.2	8.5	23.9	0.0
1			R 7		M	44	44	0.4	4.2	3.2	2.3	1.1	8.8	23.2	0.0
7	1	11	R 3	2	M	177	176	15.7	17.6	16.0	9.7	6.5	33.8	74.9	1.0
7	1	12	R 3	2	M	175	174	14.4	18.6	15.4	11.1	4.5	32.7	72.5	1.0
7	2	13	R 3	1	F	174	172	15.1	22.8	11.9	13.1	6.3	30.5	71.0	2.0

7	2	14	R 3	1	F	168	166	12.3	17.6	12.4	10.1	7.4	31.6	72.3	2.0
7	3	15	R 7	2	M	156	155	12.6	15.8	11.7	9.4	6.0	31	66.5	1.0
7	3	16	R 7	2	M	205	204	16.3	17.8	16.8	11.4	10.4	40.8	87.6	1.0
7	4	17	C	3	F	192	190	16.4	20.0	15.1	13.6	7.4	36.4	79.3	2.0
7	4	18	C	3	F	199	197	15.7	16.4	16.9	10.1	9.7	37.8	88.9	2.0
7	5	19	C	2	M	203	200	16.2	20.5	15.6	12.1	9.6	41.3	82.3	3.0
7	5	110	C	2	M	200	198	16.9	26.8	15.4	12.5	7.0	42.6	73.9	2.0
7	6	111	C	2	F	237	234	18.9	24.1	19.5	17.0	8.8	49.4	93.0	3.0
7	6	112	C	2	F	186	183	13.9	14.9	13.6	11.9	8.2	39.1	78.5	3.0
7	7	113	R 7	1	M	165	164	14.0	14.3	15.0	9.0	6.0	35.6	69.4	1.0
7	7	114	R 7	1	M	148	147	11.8	11.5	12.1	7.8	6.2	30.9	66.1	1.0
7	8	115	R 3	4	F	141	139	9.1	14.3	9.3	9.1	5.8	24.3	66.3	2.0
7	8	116	R 3	4	F	184	183	11.3	18.0	15.0	12.3	9.5	33.4	81.0	1.0
7	9	117	C	1	M	182	180	14.7	17.2	17.1	11.2	7.4	35.3	74.3	2.0
7	9	118	C	1	M	186	185	13.6	18.9	12.5	13.4	6.6	36.5	82.0	1.0
7	10	119	R 7	1	F	164	162	14.3	16.3	13.2	11.1	7.1	32.5	66.8	2.0
7	10	120	R 7	1	F	175	173	12.3	14.7	14.9	10.5	8.0	34.7	75.4	2.0
7	11	121	R 3	1	M	175	175	16.7	21.2	13.4	11.4	7.8	30.2	72.8	0.0
7	11	122	R 3	1	M	165	164	14.0	15.7	12.2	12.5	6.7	29	72.3	1.0
7	12	123	C	4	F	179	177	11.9	15.2	14.8	11.3	9.2	33.9	79.9	2.0
7	12	124	C	4	F	195	193	15.9	19.6	15.5	12.7	13.2	37.3	77.4	2.0
7	13	125	R 3	4	M	166	165	7.5	17.0	13.2	11.7	7.3	31.8	75.6	1.0
7	13	126	R 3	4	M	134	133	6.8	12.7	11.3	7.9	6.4	26	61.1	1.0
7	14	127	R 3	4	F	175	173	9.6	17.4	13.2	15.1	9.1	33	73.0	2.0
7	14	128	R 3	4	F	146	144	5.9	11.8	12.2	9.9	7.7	27.8	67.2	2.0
7	15	129	R 7	4	M	162	161	11.1	16.2	13.2	10.6	5.8	29.3	73.8	1.0
7	15	130	R 7	4	M	166	165	10.6	13.0	14.0	10.6	9.8	29.9	74.9	1.0
7	16	131	R 7	1	F	177	175	12.5	17.8	13.3	13.5	6.7	34	77.4	2.0
7	16	132	R 7	1	F	196	195	14.3	19.5	14.8	14.9	7.5	37.5	84.7	1.0
7	17	133	R 3	2	M	180	179	12.2	16.8	14.9	13.1	8.0	36.9	75.1	1.0
7	17	134	R 3	2	M	183	182	15.8	17.4	13.9	12.4	6.9	38.5	74.7	1.0
7	18	135	C	2	F	200	198	16.5	20.8	13.5	13.9	9.2	36.5	85.3	2.0
7	18	136	C	2	F	192	190	14.8	16.4	16.0	11.8	9.1	36.8	83.0	2.0
7	19	137	C	4	M	156	154	11.0	14.9	13.6	12.1	6.4	28.2	66.0	2.0
7	19	138	C	4	M	160	158	10.9	14.9	12.3	11.3	7.9	31.6	67.7	2.0
7	20	139	R 3	3	F	186	184	14.2	19.7	15.5	14.5	10.1	35.4	73.1	2.0
7	20	140	R 3	3	F	179	176	14.0	13.9	14.8	12.9	8.3	33.3	78.9	3.0
7	21	141	R 7	2	M	188	187	12.7	19.0	16.4	13.2	7.1	36.5	80.2	1.0
7	21	142	R 7	2	M	162	162	12.8	13.3	14.0	11.4	5.9	30.3	72.6	0.0
7	22	143	R 7	3	F	144	143	7.3	13.0	10.8	11.3	5.3	27.9	66.2	1.0

7	22	144	R 7	3	F	173	171	12.7	15.7	13.2	11.5	8.3	33.3	75.3	2.0
7	23	145	R 3	3	M	143	142	8.7	13.7	11.5	9.9	6.0	27.6	63.9	1.0
7	23	146	R 3	3	M	156	156	11.5	16.1	11.9	10.5	5.9	30.2	68.1	0.0
7	24	147	R 7	4	F	152	150	9.6	15.6	10.4	10.7	6.5	30	65.6	2.0
7	24	148	R 7	4	F	154	152	9.5	12.7	11.5	10.1	6.2	32.9	67.9	2.0
7	25	149	R 7	1	M	150	150	12.0	13.3	13.5	10.3	6.5	31.3	61.2	0.0
7	25	150	R 7	1	M	159	159	13.5	16.7	10.7	10.8	7.6	31.3	66.8	0.0
7	26	151	C	1	F	167	165	14.8	13.7	13.2	10.9	7.0	34.5	70.0	2.0
7	26	152	C	1	F	192	189	15.0	15.6	16.3	12.5	9.0	39.8	79.5	3.0
7	27	153	R 7	3	M	148	147	9.9	13.4	10.6	9.7	7.7	29.6	64.5	1.0
7	27	154	R 7	3	M	158	157	11.2	14.4	11.8	9.8	7.7	35.4	65.7	1.0
7	28	155	C	4	F	170	168	12.2	17.1	13.5	11.0	7.5	31.1	74.6	2.0
7	28	156	C	4	F	145	144	9.5	11.3	10.5	8.4	7.8	31	64.3	1.0
7	29	157	C	3	M	162	160	10.3	14.9	12.7	10.0	7.8	36.4	66.6	2.0
7	29	158	C	3	M	156	154	10.3	13.0	11.4	8.5	7.1	38.3	64.5	2.0
7	30	159	R 7	2	F	152	150	12.7	14.6	12.6	10.9	7.1	31.6	59.1	2.0
7	30	160	R 7	2	F	168	167	16.8	14.3	15.0	12.2	12.0	33.4	72.4	1.0
7	31	161	R 3	1	M	202	202	16.6	21.8	15.2	12.5	7.7	38	87.4	0.0
7	31	162	R 3	1	M	184	183	14.0	17.8	15.8	12.3	7.7	35.5	79.0	1.0
7	32	163	C	3	F	189	187	14.1	19.5	15.8	13.0	9.5	38.7	74.9	2.0
7	32	164	C	3	F	208	205	17.5	17.5	16.2	14.8	10.9	39.8	86.4	3.0
7	33	165	C	2	M	208	206	13.9	18.8	16.7	14.5	9.5	39.2	91.9	2.0
7	33	166	C	2	M	200	197	16.5	18.5	15.5	14.4	8.4	37.8	84.5	3.0
7	34	167	R 3	2	F	201	199	15.0	18.8	14.8	13.7	9.6	36	89.5	2.0
7	34	168	R 3	2	F	186	185	14.7	18.4	14.9	12.1	8.7	33.1	81.9	1.0
7	35	169	C	1	M	201	199	13.6	18.2	16.2	13.9	8.2	44.9	83.4	2.0
7	35	170	C	1	M	190	188	17.3	17.3	15.4	13.2	6.6	38	80.0	2.0
7	36	171	R 3	1	F	165	163	12.9	16.9	12.5	12.2	6.6	30.3	70.6	2.0
7	36	172	R 3	1	F	191	189	16.0	17.6	15.5	12.7	7.8	34.1	84.6	2.0
7	37	173	R 7	3	M	169	166	12.0	15.4	14.1	10.5	6.9	32.8	74.2	3.0
7	37	174	R 7	3	M	175	173	11.8	14.0	14.3	11.6	9.1	35.2	75.3	2.0
7	38	175	R 7	3	F	146	144	9.8	13.3	10.9	11.5	5.6	27.5	64.4	2.0
7	38	176	R 7	3	F	173	171	12.0	14.8	14.0	13.3	6.8	33.5	74.7	2.0
7	39	177	R 3	3	M	177	176	13.3	16.6	15.6	10.1	6.8	35.3	77.4	1.0
7	39	178	R 3	3	M	186	185	13.8	17.0	13.9	12.4	8.3	34.8	83.8	1.0
7	40	179	C	1	F	200	198	15.5	17.5	16.8	14.2	9.8	41.8	81.5	2.0
7	40	180	C	1	F	183	181	15.3	16.5	15.5	12.0	7.6	33.4	80.2	2.0
7	41	181	R 7	4	M	142	142	9.3	12.2	10.6	9.4	7.2	29.8	62.6	0.0
7	41	182	R 7	4	M	194	194	14.7	17.7	17.4	12.3	10.2	35.4	85.4	0.0
7	42	183	R 7	2	F	170	168	13.1	14.4	12.1	13.3	7.9	33.6	72.6	2.0

7	42	184	R 7	2	F	179	177	14.6	17.2	13.7	11.8	7.9	35.9	74.9	2.0
7	43	185	C	3	M	188	186	15.1	15.3	14.8	13.6	8.1	41	77.7	2.0
7	43	186	C	3	M	161	159	10.6	15.7	11.1	10.4	7.8	36.2	66.6	2.0
7	44	187	R 7	4	F	172	170	12.7	13.7	12.3	11.5	9.6	33.6	74.6	2.0
7	44	188	R 7	4	F	147	145	8.7	11.2	13.8	10.1	8.0	28.5	63.6	2.0
7	45	189	R 3	4	M	152	152	8.6	16.3	11.4	10.1	5.2	28	70.8	0.0
7	45	190	R 3	4	M	139	139	8.5	12.3	11.0	9.5	5.7	27.2	63.8	0.0
7	46	191	R 3	3	F	186	184	14.1	18.2	15.1	12.7	8.9	35.5	78.3	2.0
7	46	192	R 3	3	F	154	152	10.2	13.9	12.5	10.5	6.3	30.3	68.0	2.0
7	47	193	C	4	M	175	173	11.1	15.3	16.1	14.1	9.0	32.7	74.0	2.0
7	47	194	C	4	M	182	180	10.9	14.6	13.8	10.6	9.3	40.9	79.2	2.0
7	48	195	R 3	2	F	157	155	12.0	15.0	12.3	12.3	7.2	32.1	65.1	2.0
7	48	196	R 3	2	F	149	148	12.0	13.6	11.0	10.1	7.3	31.1	62.5	1.0
14	1	201	R 3	2	M	419	415	46.8	39.2	38.1	21.3	11.8	54.9	190	4
14	1	202	R 3	2	M	557	553	56.5	58.5	51.3	46.2	19.2	52.1	252	4
14	2	203	R 3	1	F	366	358	41.5	39.6	28.6	29.5	11.6	38.1	161	8
14	2	204	R 3	1	F	431	420	41.3	41.2	42.2	37.9	14.8	57.0	179	11
14	3	205	R 7	2	M	478	472	50.0	47.4	42.3	35.1	16.4	47.5	221	6
14	3	206	R 7	2	M	422	422	36.8	48.9	37.6	39.1	13.8	45.4	190	0
14	4	207	C	3	F	486	473	57.1	53.2	40.4	35.4	15.5	50.9	210	13
14	4	208	C	3	F	473	455	45.4	46.4	38.5	38.6	15.8	46.0	217	18
14	5	209	C	2	M	537	525	60.5	56.6	43.9	37.4	16.4	57.8	237	12
14	5	210	C	2	M	428	418	42.0	44.0	35.5	37.2	11.1	47.6	189	10
14	6	211	C	2	F	556	544	60.7	65.3	48.4	43.1	16.8	59.2	238	12
14	6	212	C	2	F	475	461	39.3	47.3	39.4	37.0	14.9	51.2	219	14
14	7	213	R 7	1	M	533	523	58.5	57.4	49.4	41.9	19.4	55.1	231	10
14	7	214	R 7	1	M	524	517	59.6	60.8	47.1	45.8	17.3	51.0	219	7
14	8	215	R 3	4	F	348	339	33.3	37.9	32.6	27.9	11.3	36.6	150	9
14	8	216	R 3	4	F	421	409	35.1	54.1	31.8	33.5	12.6	42.2	193	12
14	9	217	C	1	M	518	504	66.3	51.9	43.3	39.6	18.0	49.4	222	14
14	9	218	C	1	M	562	546	55.4	58.3	52.5	44.3	19.0	56.9	246	16
14	10	219	R 7	1	F	449	438	50.0	46.6	41.3	34.1	15.5	48.0	194	11
14	10	220	R 7	1	F	463	450	50.2	47.6	39.9	34.5	16.4	44.4	209	13
14	11	221	R 3	1	M	514	501	57.1	56.5	43.8	43.3	19.2	54.5	220	13
14	11	222	R 3	1	M	527	517	57.1	50.5	46.3	38.2	19.2	55.2	242	10
14	12	223	C	4	F	440	429	39.5	46.2	37.3	35.2	15.3	45.1	196	11
14	12	224	C	4	F	467	455	45.9	53.7	42.1	35.2	17.1	46.4	202	12
14	13	225	R 3	4	M	473	465	34.9	49.0	40.9	34.2	17.4	54.3	223	8
14	13	226	R 3	4	M	501	494	45.9	56.4	43.7	38.6	19.1	57.2	222	7
14	14	227	R 3	4	F	401	390	38.1	38.7	38.2	31.3	14.5	41.2	183	11

14	14	228	R 3	4	F	320	310	24.7	31.5	28.1	26.2	9.3	38.2	147	10
14	15	229	R 7	4	M	323	318	27.3	33.6	28.6	25.7	11.7	30.4	154	5
14	15	230	R 7	4	M	337	331	24.5	36.6	26.3	28.8	12.1	38.7	157	6
14	16	231	R 7	1	F	498	484	53.8	49.2	41.2	37.7	16.8	51.8	215	14
14	16	232	R 7	1	F	409	397	41.7	40.2	38.8	35.1	13.4	40.2	176	12
14	17	233	R 3	2	M	448	442	53.7	48.2	42.2	36.4	13.8	42.9	189	6
14	17	234	R 3	2	M	445	437	45.2	49.8	39.2	36.7	14.2	45.8	194	8
14	18	235	C	2	F	480	467	51.3	50.7	42.0	36.8	15.6	51.2	208	13
14	18	236	C	2	F	562	549	64.7	55.1	48.6	44.2	18.0	58.4	244	13
14	19	237	C	4	M	483	469	53.9	49.4	37.3	37.5	16.7	49.5	217	14
14	19	238	C	4	M	513	502	52.1	53.3	44.5	39.1	18.9	51.2	222	11
14	20	239	R 3	3	F	547	534	56.7	53.0	47.9	40.5	19.7	56.4	241	13
14	20	240	R 3	3	F	463	450	45.3	44.2	45.9	38.9	16.9	46.6	202	13
14	21	241	R 7	2	M	500	495	54.0	53.3	40.9	37.0	17.3	54.0	222	5
14	21	242	R 7	2	M	454	448	56.1	43.6	40.5	33.9	15.1	47.0	200	6
14	22	243	R 7	3	F	407	395	45.6	37.3	36.7	31.8	14.1	37.6	182	12
14	22	244	R 7	3	F	441	430	49.5	41.5	37.3	33.7	15.0	45.2	194	11
14	23	245	R 3	3	M	370	365	36.2	43.3	32.2	30.6	12.5	42.6	160	5
14	23	246	R 3	3	M	419	412	45.9	40.2	40.7	30.6	13.1	46.0	185	7
14	24	247	R 7	4	F	415	404	39.9	40.7	36.5	32.3	14.5	45.1	188	11
14	24	248	R 7	4	F	380	368	37.2	37.9	30.9	30.7	16.0	41.9	167	12
14	25	249	R 7	1	M	448	435	52.7	38.9	39.6	36.4	15.6	57.0	184	13
14	25	250	R 7	1	M	*	436	46.8	42.5	43.5	36.4	16.9	51.7	190	#VALUE!
14	26	251	C	1	F	495	479	59.8	46.6	48.4	37.8	17.0	46.6	213	16
14	26	252	C	1	F	472	459	55.2	48.2	42.5	36.2	16.3	46.0	202	13
14	27	253	R 7	3	M	444	435	45.5	43.7	45.2	35.5	12.5	55.8	185	9
14	27	254	R 7	3	M	397	392	40.8	40.2	37.6	31.5	13.5	45.2	177	5
14	28	255	C	4	F	440	428	50.7	44.3	38.8	34.6	14.8	43.4	190	12
14	28	256	C	4	F	461	445	45.6	48.2	37.4	36.4	20.6	40.6	205	16
14	29	257	C	3	M	536	523	59.4	58.4	48.0	42.8	16.1	54.7	235	13
14	29	258	C	3	M	491	480	59.4	50.8	44.1	34.3	15.1	42.5	212	11
14	30	259	R 7	2	F	505	490	56.8	48.6	47.1	39.4	15.6	52.7	213	15
14	30	260	R 7	2	F	452	431	48.0	44.9	42.1	39.9	15.0	42.1	195	21
14	31	261	R 3	1	M	528	522	60.4	57.2	47.3	40.7	20.1	64.3	220	6
14	31	262	R 3	1	M	439	430	52.6	42.3	40.0	32.5	13.9	40.5	198	9
14	32	263	C	3	F	469	455	47.2	40.7	45.8	37.5	16.4	50.5	202	14
14	32	264	C	3	F	484	471	56.4	41.9	45.1	38.8	17.1	48.0	212	13
14	33	265	C	2	M	431	420	48.8	44.3	36.0	29.8	15.3	38.1	195	11
14	33	266	C	2	M	518	504	53.4	50.9	53.9	45.3	16.8	52.5	219	14
14	34	267	R 3	2	F	506	491	56.8	49.6	44.4	35.9	15.8	51.5	219	15

14	34	268	R 3	2	F	445	423	47.0	44.2	40.3	35.6	16.2	43.7	197	22
14	35	269	C	1	M	574	561	68.3	65.1	52.9	48.9	20.4	55.6	237	13
14	35	270	C	1	M	597	580	69.6	57.9	56.6	50.0	19.3	66.1	250	17
14	36	271	R 3	1	F	507	489	56.6	57.4	42.2	42.4	16.1	54.9	210	18
14	36	272	R 3	1	F	487	471	57.4	46.9	45.9	39.9	16.1	46.6	210	16
14	37	273	R 7	3	M	433	425	43.2	40.5	36.5	32.5	14.9	48.1	195	8
14	37	274	R 7	3	M	377	371	39.5	37.6	33.6	26.1	11.4	44.1	170	6
14	38	275	R 7	3	F	360	349	41.7	34.7	30.5	32.7	10.8	31.9	156	11
14	38	276	R 7	3	F	468	454	49.7	45.7	40.0	36.3	14.9	49.8	206	14
14	39	277	R 3	3	M	476	467	53.9	44.7	41.5	32.8	17.9	54.2	223	9
14	39	278	R 3	3	M	493	484	52.9	53.3	43.9	38.2	15.8	48.8	223	9
14	40	279	C	1	F	513	497	67.5	54.3	39.5	37.4	15.5	50.1	218	16
14	40	280	C	1	F	490	472	55.2	48.6	43.9	38.4	14.8	42.6	211	18
14	41	281	R 7	4	M	433	425	41.7	46.1	35.4	35.6	15.8	47.4	195	8
14	41	282	R 7	4	M	390	382	36.3	37.0	36.5	28.8	15.5	41.9	176	8
14	42	283	R 7	2	F	424	407	43.8	45.7	38.0	33.0	14.2	48.5	174	17
14	42	284	R 7	2	F	495	480	50.4	42.6	43.2	36.5	19.5	50.9	219	15
14	43	285	C	3	M	546	527	58.8	49.7	53.8	41.3	18.7	57.3	239	19
14	43	286	C	3	M	486	472	54.7	50.0	45.9	41.0	16.0	48.4	206	14
14	44	287	R 7	4	F	472	457	47.2	54.6	37.5	39.8	15.8	46.4	206	15
14	44	288	R 7	4	F	452	441	38.1	49.5	37.8	36.9	15.7	49.3	205	11
14	45	289	R 3	4	M	388	374	40.3	41.1	32.1	30.8	13.6	40.0	170	14
14	45	290	R 3	4	M	309	302	21.4	27.8	30.3	22.9	10.1	35.8	149	7
14	46	291	R 3	3	F	349	339	34.6	35.0	31.3	26.0	11.8	42.5	148	10
14	46	292	R 3	3	F	430	407	39.3	46.9	36.1	33.9	18.0	41.7	192	23
14	47	293	C	4	M	381	369	30.0	28.8	32.6	28.7	11.9	48.9	179	12
14	47	294	C	4	M	501	488	58.1	52.9	41.2	38.7	17.7	49.4	222	13
14	48	295	R 3	2	F	453	456	48.1	51.75	41.5	36.2	18.2	50.3	200	-3
14	48	296	R 3	2	F	425	415	44.8	47.49	37.9	35.5	17.8	41.8	179	10
21	1	301	R 3	2	M	823	811	102	88.9	78.7	65.4	27.8	90.6	334	12
21	1	302	R 3	2	M	953	939	134	114	96.8	75.5	24.1	86.8	384	14
21	2	303	R 3	1	F	800	766	102	73.4	77.2	67.4	19.2	85.0	329	34
21	2	304	R 3	1	F	1024	988	143	102	87.0	80.7	34.9	106	424	36
21	3	305	R 7	2	M	1018	996	112	116	103	90.4	30.2	84.7	430	22
21	3	306	R 7	2	M	940	934	126	99.1	94.5	69.7	32.1	92.7	401	6
21	4	307	C	3	F	919	890	115	103	78.5	75.8	32.7	85.7	383	29
21	4	308	C	3	F	957	926	140	119	79.4	77.4	26.7	81.7	382	31
21	5	309	C	2	M	1174	1142	185	118	105	82.19	34.61	115	480	32
21	5	310	C	2	M	1077	1023	157	119	96.1	81.0	31.1	94.4	447	54
21	6	311	C	2	F	1007	970	151	105	88.4	80.2	37.8	99.8	383	37

21	6	312	C	2	F	921	864	134	95.4	75.5	74.8	29.5	82.0	373	57
21	7	313	R 7	1	M	855	791	104	82.9	79.8	67.5	25.0	89.7	370	64
21	7	314	R 7	1	M	1026	999	124	106	99.4	76.2	30.8	109	437	27
21	8	315	R 3	4	F	858	804	108	102	70.7	68.0	37.7	65.1	359	54
21	8	316	R 3	4	F	729	700	78.4	83.4	74.6	58.9	26.7	59.4	304	29
21	9	317	C	1	M	758	756	119	73.3	62.9	64.7	20.4	60.6	301	2
21	9	318	C	1	M	1174	1126	177	133	105	94.5	29.5	104	459	48
21	10	319	R 7	1	F	976	938	133	98.8	87.6	70.3	28.5	127	381	38
21	10	320	R 7	1	F	833	806	127	90.2	78.4	71.3	25.8	76.7	329	27
21	11	321	R 3	1	M	1027	999	143	107	89.8	68.3	29.1	91.8	446	28
21	11	322	R 3	1	M	987	994	123	103	104	81.5	33.9	87.7	434	-7
21	12	323	C	4	F	1038	955	131	101	90.6	67.0	37.2	75.1	425	83
21	12	324	C	4	F	935	846	112	105	76.1	76.0	29.0	62.2	380	89
21	13	325	R 3	4	M	828	778	91.6	91.1	91.4	67.7	26.3	66.6	361	50
21	13	326	R 3	4	M	818	803	98.4	103	71	64.6	24.4	66.7	362	15
21	14	327	R 3	4	F	933	921	104	109	84.21	72.9	32.2	88.3	406	12
21	14	328	R 3	4	F	854	840	110	80.2	81.61	61.6	30.0	85.8	373	14
21	15	329	R 7	4	M	1086	1062	135	114	89.5	74.5	39.2	100	454	24
21	15	330	R 7	4	M	954	930	113	97.6	94.8	69.5	32.6	72.5	427	24
21	16	331	R 7	1	F	990	945	127	97.5	90.8	76.6	30.3	88.2	425	45
21	16	332	R 7	1	F	924	887	123	112	89.6	76.0	29.7	87.4	366	37
21	17	333	R 3	2	M	1076	1036	138	105	115	83.8	31.6	93.8	461	40
21	17	334	R 3	2	M	844	829	129	92.59	85.4	62.7	22.7	75.8	349	15
21	18	335	C	2	F	1025	986	156	113	91.0	75.6	35.8	87.8	406	39
21	18	336	C	2	F	872	844	121	97.61	85.2	69.2	27.2	82.5	354	28
21	19	337	C	4	M	1023	983	126	114	85.8	79.8	39.4	99.2	439	40
21	19	338	C	4	M	968	949	116	111	74.3	74.1	36.0	83.8	425	19
21	20	339	R 3	3	F	796	763	98.32	83.37	76.4	61.1	22.4	80.6	332	33
21	20	340	R 3	3	F	919	890	115	109	80.0	70.3	33.0	78.9	396	29
21	21	341	R 7	2	M	992	954	136	121	86.2	82.4	27.8	90.1	396	38
21	21	342	R 7	2	M	1040	987	119	116	87.2	82.4	33.6	112	439	53
21	22	343	R 7	3	F	897	869	137	90.92	77.1	69.3	30.2	74.97	364	28
21	22	344	R 7	3	F	623	596	72.32	63.60	52.4	58.3	20.5	69.23	250	27
21	23	345	R 3	3	M	920	897	112	103	81.1	78.4	26.9	83.82	394	23
21	23	346	R 3	3	M	913	869	113	105	91.2	68.2	24.2	85.24	395	44
21	24	347	R 7	4	F	830	810	96.52	109	76.9	73.9	22.3	62.27	349	20
21	24	348	R 7	4	F	847	819	97.1	90.7	78.4	64.7	31.1	74.2	368	28
21	25	349	R 7	1	M	1076	1022	139.0	112.0	105.0	78.8	32.8	104.0	450	54
21	25	350	R 7	1	M	1071	1049	132.0	133.0	114.0	95.8	33.8	86.0	437	22
21	26	351	C	1	F	1002	922	133.0	119.0	87.8	89.4	26.1	76.0	421	80

21	26	352	C	1	F	852	814	133.0	89.0	76.9	65.0	26.9	63.7	345	38
21	27	353	R 7	3	M	730	709	84.7	82.7	70.9	56.6	18.4	73.7	309	21
21	27	354	R 7	3	M	993	964	123.0	109.0	94.3	84.3	32.4	88.9	416	29
21	28	355	C	4	F	779	747	85.8	101.0	73.8	67.3	28.4	56.2	323	32
21	28	356	C	4	F	881	846	104.0	98.3	79.3	66.5	39.1	77.0	374	35
21	29	357	C	3	M	1129	1089	151.0	117.0	110.0	83.9	40.8	97.8	471	40
21	29	358	C	3	M	1162	1109	146.0	122.0	111.0	97.3	39.4	110.0	473	53
21	30	359	R 7	2	F	928	895	130.0	107.0	87.4	78.7	22.2	91.3	375	33
21	30	360	R 7	2	F	839	806	94.7	98.4	76.6	68.0	34.5	87.6	339	33
21	31	361	R 3	1	M	946	922	107.0	112.0	93.6	88.5	26.3	80.2	394	24
21	31	362	R 3	1	M	833	833	99.0	100.0	87.9	79.4	22.2	75.3	354	0
21	32	363	C	3	F	955	924	129.0	112.0	88.1	80.5	30.6	76.0	382	31
21	32	364	C	3	F	724	703	100.0	78.0	70.1	57.6	24.2	60.9	287	21
21	33	365	C	2	M	1070	1045	141.0	118.0	105.0	79.1	40.7	86.8	441	25
21	33	366	C	2	M	1024	991	145.0	113.0	85.2	89.7	29.8	76.3	428	33
21	34	367	R 3	2	F	989	957	132.0	130.0	102.0	79.4	28.8	87.0	395	32
21	34	368	R 3	2	F	809	771	109.0	96.7	68.7	68.4	23.1	64.9	331	38
21	35	369	C	1	M	1094	1060	162.0	123.0	92.8	95.3	27.6	70.9	437	34
21	35	370	C	1	M	1043	1035	162.0	109.0	111.0	82.2	26.5	87.4	424	8
21	36	371	R 3	1	F	940	904	104.0	97.2	82.9	73.3	28.0	115.0	392	36
21	36	372	R 3	1	F	928	898	113.0	119.0	86.1	83.2	28.9	89.0	370	30
21	37	373	R 7	3	M	854	829	109.0	92.0	79.6	73.1	26.7	81.2	349	25
21	37	374	R 7	3	M	848	818	95.7	105.0	79.3	71.4	24.2	77.1	352	30
21	38	375	R 7	3	F	560	538	70.5	58.5	49.5	46.7	14.4	43.2	242	22
21	38	376	R 7	3	F	766	742	92.2	77.8	70.6	58.0	25.0	82.7	316	24
21	39	377	R 3	3	M	638	623	72.3	77.3	68.9	51.2	18.4	50.7	273	15
21	39	378	R 3	3	M	715	699	74.2	83.3	63.8	65.5	24.5	77.1	292	16
21	40	379	C	1	F	953	882	120	103	82.7	68.9	25.9	97.5	378	71
21	40	380	C	1	F	942	905	118	108	81.8	80.6	25.0	82.3	387	37
21	41	381	R 7	4	M	928	898	119.0	97.6	92.0	69.6	39.1	97.8	381	30
21	41	382	R 7	4	M	789	751	81.7	88.7	77.7	59.4	22.2	70.6	356	38
21	42	383	R 7	2	F	871	834	90.6	110.0	74.9	76.8	22.9	81.6	357	37
21	42	384	R 7	2	F	681	654	73.1	73.4	58.1	70.2	22.0	70.0	274	27
21	43	385	C	3	M	955	921	141	105	83.7	77.6	27.3	95.4	374	34
21	43	386	C	3	M	936	906	136	95	91.8	69.5	23.0	89.1	387	30
21	44	387	R 7	4	F	746	729	96.2	80.5	71.0	59.0	25.5	68.9	319	17
21	44	388	R 7	4	F	774	754	98.4	80.6	67.7	58.2	23.7	78.7	335	20
21	45	389	R 3	4	M	960	946	124	111	103	71.6	29.2	80.7	406	14
21	45	390	R 3	4	M	724	710	69.7	90.2	69.2	66.0	21.3	64.4	314	14
21	46	391	R 3	3	F	858	814	100	91.4	82.8	73.2	25.6	79.8	351	44

21	46	392	R 3	3	F	843	813	96.8	95.5	79.6	66.1	24.2	86.2	347	30
21	47	393	C	4	M	1131	1099	144	130	99.4	100	31.8	98.8	467	32
21	47	394	C	4	M	864	838	109	87.3	87.0	63.4	24.4	91.9	335	26
21	48	395	R 3	2	F	786	762	99.9	80.0	80.4	64.4	22.3	73.5	328	24
21	48	396	R 3	2	F	873	852	109	105	78.6	75.2	26.7	82.6	376	21
28	1	401	R 3	2	M	1183	1135	166	121	130	109	28.7	68.1	495	48
28	1	402	R 3	2	M	1356	1311	142	157	138	95.7	42.6	126	555	45
28	2	403	R 3	1	F	1343	1282	196	140	130	104	36.1	131	520	61
28	2	404	R 3	1	F	1389	1329	175	154	117	103	32.5	123	563	60
28	3	405	R 7	2	M	1459	1387	203	161	137	121	38.0	100	591	72
28	3	406	R 7	2	M	1212	1163	162	125	124	95.6	33.1	136	460	49
28	4	407	C	3	F	1402	1343	160	134	115	103	45.7	142	583	59
28	4	408	C	3	F	1565	1493	276	164	135	102	54.0	118	602	72
28	5	409	C	2	M	1311	1254	215	133	137	115	39.3	68.5	521	57
28	5	410	C	2	M	1423	1325	209	156	137	125	37.7	122	512	98
28	6	411	C	2	F	874	831	118	94.8	83.5	70.6	20.6	64.6	355	43
28	6	412	C	2	F	1562	1503	242	171	146	111	48.2	149	599	59
28	7	413	R 7	1	M	1353	1315	205	137	141	107	39.5	133	528	38
28	7	414	R 7	1	M	1578	1496	210	151	151	127	39.1	160	606	82
28	8	415	R 3	4	F	1206	1145	137	132	112	101	35.2	101	491	61
28	8	416	R 3	4	F	1448	1385	180	165	138	111	45.1	120	590	63
28	9	417	C	1	M	1612	1530	277	159	169	117	38.6	146	594	82
28	9	418	C	1	M	1287	1224	200	128	117	91.4	34.1	133	455	63
28	10	419	R 7	1	F	1210	1150	181	127	114	94.9	31.5	111	468	60
28	10	420	R 7	1	F	1269	1209	161	137	119	108	31.8	137	498	60
28	11	421	R 3	1	M	1438	1390	199	167	132	103	35.4	114	611	48
28	11	422	R 3	1	M	1591	1531	215	192	160	130	33.8	128	648	60
28	12	423	C	4	F	1354	1298	185	151	119	103	40.9	102	562	56
28	12	424	C	4	F	1391	1318	208	130	151	99.9	40.5	117	530	73
28	13	425	R 3	4	M	1248	1211	153	147	118	90.9	37.6	118	511	37
28	13	426	R 3	4	M	1153	1113	113	128	123	92.8	32	98.9	497	40
28	14	427	R 3	4	F	1427	1373	182	154	153	113	46.3	113	577	54
28	14	428	R 3	4	F	1444	1385	177	171	124	112	48.8	133	580	59
28	15	429	R 7	4	M	1094	1010	105	108	113	66.1	32.5	88.1	475	84
28	15	430	R 7	4	M	1371	1325	167	159	121	105	42.6	109	585	46
28	16	431	R 7	1	F	1370	1288	212	176	133	126	46.4	125	662	82
28	16	432	R 7	1	F	1323	1253	178	143	130	102	42.9	118	513	70
28	17	433	R 3	2	M	1268	1314	178	151	145	108	36.0	120	548	-46
28	17	434	R 3	2	M	1363	1301	187	156	136	112	42.6	117	528	62
28	18	435	C	2	F	739	697	98.5	80.1	73.9	65.9	20.5	40	286	42

28	18	436	C	2	F	1274	1215	210	128	122	99.2	37.5	75.4	509	59
28	19	437	C	4	M	1562	1499	214	182	154	122	42.6	97.4	650	63
28	19	438	C	4	M	1420	1361	176	155	131	119	37.3	101	599	59
28	20	439	R 3	3	F	1030	989	123	116	94.4	91.3	24.8	91.1	419	41
28	20	440	R 3	3	F	1574	1518	225	197	144	130	46.6	129	619	56
28	21	441	R 7	2	M	1480	1427	197	167	150	127	41.0	139	567	53
28	21	442	R 7	2	M	1338	1279	164	154	127	113	33.5	109	546	59
28	22	443	R 7	3	F	1383	1327	190	151	148	106	37.7	131	529	56
28	22	444	R 7	3	F	1541	1475	214	181	152	108	53.2	138	588	66
28	23	445	R 3	3	M	1511	1453	206	150	146	98.9	55.6	156	580	58
28	23	446	R 3	3	M	1428	1371	191	149	156	107	40.0	120	557	57
28	24	447	R 7	4	F	1276	1236	162	152	114	108	41.2	112	521	40
28	24	448	R 7	4	F	1265	1148	154	153	114	107	32.2	98.0	512	117
28	25	449	R 7	1	M	1526	1482	225	169	156	145	45.7	124	599	44
28	25	450	R 7	1	M	1502	1440	222	144	153	124	45.7	139	585	62
28	26	451	C	1	F	1407	1335	217	142	138	108	32.8	122	552	72
28	26	452	C	1	F	1438	1383	230	151	118	107	38.8	149	559	55
28	27	453	R 7	3	M	1401	1337	194	145	127	105	42.5	133	548	64
28	27	454	R 7	3	M	1543	1476	226	168	158	127	47.2	128	592	67
28	28	455	C	4	F	1385	1311	202	157	124	102	42.0	109	552	74
28	28	456	C	4	F	1519	1452	216	174	140	105	46.8	129	601	67
28	29	457	C	3	M	1689	1634	248	194	158	131	56.8	130	683	55
28	29	458	C	3	M	1596	1540	247	162	157	119	42.4	141	633	56
28	30	459	R 7	2	F	1291	1225	169	128	128	107	30.0	114	523	66
28	30	460	R 7	2	F	1330	1259	169	137	123	116	33.4	128	530	71
28	31	461	R 3	1	M	1632	1570	208	187	155	136	48.1	151	643	62
28	31	462	R 3	1	M	1561	1489	239	170	153	114	42.9	157	592	72
28	32	463	C	3	F	1168	1108	165	133	106	90.2	30.7	98.1	463	60
28	32	464	C	3	F	1510	1434	242	148	120	112	46.5	129	592	76
28	33	465	C	2	M	1525	1427	253	173	137	112	45.6	112	568	98
28	33	466	C	2	M	1658	1570	254	193	167	122	42.1	114	636	88
28	34	467	R 3	2	F	1430	1377	212	181	125	111	35.6	110	573	53
28	34	468	R 3	2	F	1380	1315	184	145	115	103	38.0	152	539	65
28	35	469	C	1	M	1795	1709	301	183	169	125	54.4	161	691	86
28	35	470	C	1	M	1508	1438	223	188	145	114	48.2	128	569	70
28	36	471	R 3	1	F	1406	1331	206	167	139	92.8	40.4	118	535	75
28	36	472	R 3	1	F	1425	1362	192	143	140	120	37.2	126	571	63
28	37	473	R 7	3	M	1621	1544	193	155	129	113	39.2	124	514	77
28	37	474	R 7	3	M	1343	1255	178	153	140	83	35.6	107	523	88
28	38	475	R 7	3	F	1234	1126	156	140	107	86.1	32.6	86.2	490	108

28	38	476	R 7	3	F	1451	1251	188	136	112	130	42.3	113	551	200
28	39	477	R 3	3	M	1462	1410	202	160	132	119	52.7	122	591	52
28	39	478	R 3	3	M	1426	1370	173	168	128	113	41.0	123	573	56
28	40	479	C	1	F	1576	1496	268	177	144	115	42.8	127	593	80
28	40	480	C	1	F	1346	1276	215	133	125	98.7	36.9	132	515	70
28	41	481	R 7	4	M	1384	1319	160	165	130	106	43.7	118	553	65
28	41	482	R 7	4	M	1430	1308	156	170	147	106	47.0	117	564	122
28	42	483	R 7	2	F	1228	1168	188	132	112	102	30.5	118	464	60
28	42	484	R 7	2	F	1264	1211	180	132	129	94.9	31.2	117	489	53
28	43	485	C	3	M	1527	1460	218	155	141	108	46.2	151	608	67
28	43	486	C	3	M	1528	1437	193	163	133	120	41.2	125	629	91
28	44	487	R 7	4	F	1309	1237	155	144	107	109	35.8	96.5	541	72
28	44	488	R 7	4	F	1292	1234	144	156	121	106	37.7	131	529	58
28	45	489	R 3	4	M	1327	1278	151	154	138	97.6	39.8	110	561	49
28	45	490	R 3	4	M	1448	1391	201	165	127	93.1	47.76	144	577	57
28	46	491	R 3	3	F	1514	1457	225	176	147	129	49.12	121	574	57
28	46	492	R 3	3	F	1375	1367	191	139	132	107	42.99	118	543	8
28	47	493	C	4	M	1415	1354	196	156	122	113	43.15	123	581	61
28	47	494	C	4	M	1507	1440	223	157	153	114	42.34	142	583	67
28	48	495	R 3	2	F	1496	1428	216	148	129	114	34.5	110	630	68
28	48	496	R 3	2	F	1387	1324	195	158	133	108	35.1	137	534	63
35	1	501	R 3	2	M	1597	1558	223	177	151	129	44.5	99.0	695	39
35	1	502	R 3	2	M	2153	2660	312	234	234	163	59.8	143	833	-507
35	2	503	R 3	1	F	1947	1860	318	217	184	154	50.9	162	714	87
35	2	504	R 3	1	F	1973	1884	302	223	194	159	46.6	130	789	89
35	3	505	R 7	2	M	2169	1942	301	227	211	155	51.9	183	814	227
35	3	506	R 7	2	M	2398	2274	367	248	240	171	61.3	184	967	124
35	4	507	C	3	F	2089	1961	327	215	192	145	72.2	136	812	128
35	4	508	C	3	F	1897	1739	282	179	167	149	50	140	660	158
35	5	509	C	2	M	2542	2415	403	275	235	178	66.6	209	968	127
35	5	510	C	2	M	2512	2393	464	287	242	180	56.2	163	929	119
35	6	511	C	2	F	2032	1925	326	246	187	144	43.3	120	765	107
35	6	512	C	2	F	1864	1747	298	222	147	114	44.2	108	783	117
35	7	513	R 7	1	M	2208	2119	290	248	206	149	57.7	159	929	89
35	7	514	R 7	1	M	2060	1960	285	255	199	155	48.4	138	822	100
35	8	515	R 3	4	F	1637	1540	212	174	155	116	43.5	116	641	97
35	8	516	R 3	4	F	1782	1673	223	210	153	121	49.5	121	735	109
35	9	517	C	1	M	1971	1855	293	220	215	143	48.6	168	692	116
35	9	518	C	1	M	2085	2006	363	252	198	152	47.9	192	781	79
35	10	519	R 7	1	F	1732	1609	212	180	156	125	45.7	159	684	123

35	10	520	R 7	1	F	*	*	264	190	173	132	36	112	661	#VALUE!
35	11	521	R 3	1	M	2104	2017	293	232	227	162	42	158	840	87
35	11	522	R 3	1	M	2254	2178	308	256	238	172	47.2	161	876	76
35	12	523	C	4	F	1750	1673	263	204	186	134	39.2	101	697	77
35	12	524	C	4	F	1234	1176	153	144	108	104	27.6	63.7	541	58
35	13	525	R 3	4	M	1638	1579	180	199	158	115	36.4	121	719	59
35	13	526	R 3	4	M	2309	2166	280	260	229	156	50.0	188	932	143
35	14	527	R 3	4	F	1576	1501	194	187	149	118	43.5	114	653	75
35	14	528	R 3	4	F	1685	1598	263	230	164	146	30.9	86.9	663	87
35	15	529	R 7	4	M	1633	*	172	223	169	124	34.2	118	658	#VALUE!
35	15	530	R 7	4	M	2007	*	226	254	214	154	45.4	142	832	#VALUE!
35	16	531	R 7	1	F	1730	1642	244	185	171	131	35.9	162	641	88
35	16	532	R 7	1	F	1961	1884	289	218	200	143	44.9	201	762	77
35	17	533	R 3	2	M	2105	2002	347	222	215	154	53.5	153	798	103
35	17	534	R 3	2	M	2251	2167	295	266	226	162	46.8	153	974	84
35	18	535	C	2	F	1877	1787	312	213	173	152	46.4	114	701	90
35	18	536	C	2	F	1922	1828	330	236	157	108	61.1	138	744	94
35	19	537	C	4	M	2032	1966	279	227	188	174	67.8	99.0	912	66
35	19	538	C	4	M	1580	1517	191	176	153	139	32.01	91	705	63
35	20	539	R 3	3	F	1684	1644	270	188	183	129	40.1	139	658	40
35	20	540	R 3	3	F	1919	1854	257	225	180	140	44.3	113	836	65
35	21	541	R 7	2	M	2300	2247	401	248	234	183	56.9	223	857	53
35	21	542	R 7	2	M	2098	2029	300	222	225	144	50.8	206	817	69
35	22	543	R 7	3	F	1725	1653	229	199	161	138	41.0	163	679	72
35	22	544	R 7	3	F	1466	1402	206	154	143	137	38.4	110	567	64
35	23	545	R 3	3	M	2221	2155	299	288	217	163	58.8	203	862	66
35	23	546	R 3	3	M	1992	1920	289	248	201	174	43.7	123	792	72
35	24	547	R 7	4	F	1435	1307	153	159	131	114	45.3	116	582	128
35	24	548	R 7	4	F	1625	1511	225	190	144	102	36.7	133	630	114
35	25	549	R 7	1	M	1789	1700	207	203	174	143	37.9	126	782	89
35	25	550	R 7	1	M	2018	1841	272	210	204	146	52.5	70.8	805	177
35	26	551	C	1	F	1693	1580	269	169	151	118	38.1	161	628	113
35	26	552	C	1	F	1705	1619	363	164	165	116	38.0	124	593	86
35	27	553	R 7	3	M	1782	1699	221	227	163	131	52.9	129	774	83
35	27	554	R 7	3	M	1946	1845	287	205	198	149	58.3	138	758	101
35	28	555	C	4	F	1508	1450	203	183	157	123	33.7	93.4	629	58
35	28	556	C	4	F	1727	1665	278	187	182	139	40.8	113	688	62
35	29	557	C	3	M	1872	1820	297	217	197	134	56.6	125	752	52
35	29	558	C	3	M	2195	2124	330	246	166	158	43.9	135	975	71
35	30	559	R 7	2	F	1880	1804	280	198	162	127	52.8	163	736	76

35	30	560	R 7	2	F	1756	1680	274	189	179	131	44.6	158	661	76
35	31	561	R 3	1	M	1878	1780	284	198	195	147	59.6	98.4	760	98
35	31	562	R 3	1	M	2031	1954	266	246	215	166	52.1	179	775	77
35	32	563	C	3	F	1109	1053	177	122	117	93.2	27.1	53.6	458	56
35	32	564	C	3	F	898	857	118	98.05	86.6	77.2	17.7	57.7	371	41
35	33	565	C	2	M	1392	1346	256	157	143	114	33.49	51.8	575	46
35	33	566	C	2	M	1800	1739	245	212	180	149	67.55	68.6	797	61
35	34	567	R 3	2	F	1853	1769	252	208	190	143	57.74	155	728	84
35	34	568	R 3	2	F	1634	1557	229	173	164	121	42.67	130	646	77
35	35	569	C	1	M	1625	1564	272	180	164	135	40.72	111	595	61
35	35	570	C	1	M	1341	1292	205	148	127	119	41.35	65.7	575	49
35	36	571	R 3	1	F	1770	1394	291	193	183	141	45.6	137	682	376
35	36	572	R 3	1	F	1687	1615	250	190	163	138	42.77	136	644	72
35	37	573	R 7	3	M	1908	1851	287	232	200	152	54.4	134	740	57
35	37	574	R 7	3	M	1761	1632	221	215	175	144	52.6	126	713	129
35	38	575	R 7	3	F	1542	1470	186	164	143	131	48	123	632	72
35	38	576	R 7	3	F	1469	1361	168	159	132	121	40.4	109	581	108
35	39	577	R 3	3	M	1837	1797	197	232	192	138	47.8	130	819	40
35	39	578	R 3	3	M	2145	2054	259	266	208	181	59.0	147	928	91
35	40	579	C	1	F	1280	1231	197	155	128	110	37.6	64.1	507	49
35	40	580	C	1	F	1675	1593	241	190	158	130	54.2	151	627	82
35	41	581	R 7	4	M	1765	1230	183	189	179	138	53.5	125	765	535
35	41	582	R 7	4	M	1601	1489	196	192	158	126	42.9	117	660	112
35	42	583	R 7	2	F	1709	1294	245	182	167	128	40.0	164	654	415
35	42	584	R 7	2	F	1733	1635	251	203	157	134	58.9	163	640	98
35	43	585	C	3	M	2047	1955	318	214	193	152	58.1	120	843	92
35	43	586	C	3	M	2060	1972	279	240	197	167	49.4	121	872	88
35	44	587	R 7	4	F	1660	1575	190	214	151	124	41.1	112	704	85
35	44	588	R 7	4	F	1260	1151	146	144	112	96.6	58.8	85.0	516	109
35	45	589	R 3	4	M	1576	1523	183	187	123	152	45.4	122	657	53
35	45	590	R 3	4	M	1359	1327	146	177	151	116	49.3	88.4	564	32
35	46	591	R 3	3	F	1698	1615	247	206	158	151	44.4	107	661	83
35	46	592	R 3	3	F	1881	1595	283	208	174	153	46	148	717	286
35	47	593	C	4	M	2263	1630	318	262	205	177	57.42	181	906	633
35	47	594	C	4	M	2237	1622	362	251	202	165	52.21	140	868	615
35	48	595	R 3	2	F	1651	1180	192	192	154	133	53.79	183	647	471
35	48	596	R 3	2	F	1758	1279	250	203	172	140	61.58	161	647	479
42	1	601	R 3	2	M	2543	2469	385	293	254	195	49.59	201	1045	74
42	1	602	R 3	2	M	2823	2746	490	322	308	223	66.5	183	1115	77
42	2	603	R 3	1	F	2518	2422	428	291	257	168	62.72	243	911	96

42	2	604	R 3	1	F	1618	1622	266	188	168	138	64.32	98.7	665	-4
42	3	605	R 7	2	M	2762	2663	439	294	291	208	55.44	249	1086	99
42	3	606	R 7	2	M	2857	2754	478	329	273	220	87.98	269	1029	103
42	4	607	C	3	F	2312	2232	437	232	183	161	55.2	153	814	80
42	4	608	C	3	F	2427	2325	385	268	196	134	61.23	164	1029	102
42	5	609	C	2	M	2567	2467	442	252	220	201	66.47	150	1066	100
42	5	610	C	2	M	2013	1922	271	203	176	137	63.41	138	891	91
42	6	611	C	2	F	2714	2613	485	320	257	179	75.47	171	1084	101
42	6	612	C	2	F	2529	2392	434	294	223	170	53.28	165	993	137
42	7	613	R 7	1	M	2697	2588	428	289	269	197	68.45	225	1061	109
42	7	614	R 7	1	M	2777	2660	367	349	270	248	69.71	217	1064	117
42	8	615	R 3	4	F	2502	2388	354	293	229	175	74.18	195	1009	114
42	8	616	R 3	4	F	1938	1863	222	235	183	161	55.2	153	814	75
42	9	617	C	1	M	2639	2546	485	317	228	226	54.96	176	1008	93
42	9	618	C	1	M	1843	1777	328	201	171	154	71.64	60.7	759	66
42	10	619	R 7	1	F	1897	1805	300	193	188	144	44.29	161	731	92
42	10	620	R 7	1	F	2168	2051	340	247	214	157	54.06	210	783	117
42	11	621	R 3	1	M	2421	2308	316	282	224	177	62.09	197	1006	113
42	11	622	R 3	1	M	2385	2319	338	266	223	199	48.2	243	956	66
42	12	623	C	4	F	1927	1836	304	221	181	148	43.3	115	748	91
42	12	624	C	4	F	2153	2063	323	255	190	164	45.9	180	869	90
42	13	625	R 3	4	M	1814	1714	199	235	181	150	55.63	103	760	100
42	13	626	R 3	4	M	2214	2114	327	260	227	162	62.07	160	862	100
42	14	627	R 3	4	F	2102	1999	271	263	229	149	55.44	160	821	103
42	14	628	R 3	4	F	2117	2007	284	250	193	153	49.38	173	863	110
42	15	629	R 7	4	M	2155	2065	260	264	213	170	51.79	153	902	90
42	15	630	R 7	4	M	2221	2116	241	254	225	185	58.11	158	947	105
42	16	631	R 7	1	F	2225	2181	359	250	220	201	45.56	135	936	44
42	16	632	R 7	1	F	1234	1180	178	137	148	121	31.91	52.1	493	54
42	17	633	R 3	2	M	2751	2653	449	336	270	210	67.64	221	1060	98
42	17	634	R 3	2	M	2777	2681	409	323	274	213	70.48	259	1079	96
42	18	635	C	2	F	2234	2119	343	265	246	155	55.56	136	838	115
42	18	636	C	2	F	1846	1750	277	200	180	176	33.21	67.9	799	96
42	19	637	C	4	M	1851	1750	197	213	184	150	38.92	114	794	101
42	19	638	C	4	M	1929	1845	222	279	207	160	45.64	74.4	836	84
42	20	639	R 3	3	F	2454	2340	363	283	220	185	54.84	167	998	114
42	20	640	R 3	3	F	2105	2013	257	270	205	177	53.28	139	859	92
42	21	641	R 7	2	M	3000	2855	480	304	298	192	89.45	204	1212	145
42	21	642	R 7	2	M	2766	2671	401	308	300	193	76.46	233	1090	95
42	22	643	R 7	3	F	2403	2316	368	299	214	194	74.96	200	917	87

42	22	644	R 7	3	F	2338	2237	400	273	235	173	59.51	165	883	101
42	23	645	R 3	3	M	3066	2932	458	359	302	228	77.96	242	1198	134
42	23	646	R 3	3	M	3040	2933	389	333	298	208	72.19	226	1330	107
42	24	647	R 7	4	F	2342	2250	302	268	239	186	53.96	180	995	92
42	24	648	R 7	4	F	2091	2003	266	240	194	171	62.61	150	872	88
42	25	649	R 7	1	M	2922	2803	447	336	296	223	84.53	246	1117	119
42	25	650	R 7	1	M	2570	2456	378	298	251	207	75.88	162	1012	114
42	26	651	C	1	F	2204	2118	329	261	217	174	58.06	145	886	86
42	26	652	C	1	F	2416	2315	419	251	219	191	61.68	241	884	101
42	27	653	R 7	3	M	2914	2789	452	329	309	196	69.11	258	1111	125
42	27	654	R 7	3	M	2575	2480	370	287	254	209	72.56	205	1042	95
42	28	655	C	4	F	2190	2110	271	276	199	156	56.93	116	974	80
42	28	656	C	4	F	2410	2308	349	286	209	174	63.51	180	979	102
42	29	657	C	3	M	2578	2452	404	297	236	204	51.27	205	1005	126
42	29	658	C	3	M	2873	2720	449	349	297	223	63.67	193	1090	153
42	30	659	R 7	2	F	2423	2316	355	275	219	181	64.04	169	992	107
42	30	660	R 7	2	F	2342	2251	351	278	213	198	58.53	168	941	91
42	31	661	R 3	1	M	2839	2734	400	354	309	197	82.76	199	1109	105
42	31	662	R 3	1	M	2928	2825	430	325	301	231	70.63	196	1178	103
42	32	663	C	3	F	2438	2345	365	279	244	187	62.2	145	992	93
42	32	664	C	3	F	2555	2463	376	284	239	200	71.98	195	1050	92
42	33	665	C	2	M	3064	2978	540	380	294	236	72.32	214	1167	86
42	33	666	C	2	M	2808	2696	465	365	270	215	62.89	208	1037	112
42	34	667	R 3	2	F	2227	2136	353	259	201	182	52.23	197	849	91
42	34	668	R 3	2	F	2457	2368	349	278	267	185	77.44	147	1008	89
42	35	669	C	1	M	2850	2694	439	344	277	211	67.34	224	1095	156
42	35	670	C	1	M	2739	2634	493	285	274	203	59.15	166	1108	105
42	36	671	R 3	1	F	2136	2053	307	219	183	154	63.64	266	808	83
42	36	672	R 3	1	F	2284	2168	345	246	218	169	53.13	209	880	116
42	37	673	R 7	3	M	2905	2768	443	332	281	216	62.48	203	1170	137
42	37	674	R 7	3	M	2609	2501	276	275	250	214	68.25	190	1078	108
42	38	675	R 7	3	F	2614	2537	325	300	224	197	76.79	238	1117	77
42	38	676	R 7	3	F	2359	2266	349	268	221	177	68.27	212	922	93
42	39	677	R 3	3	M	2438	2337	362	260	242	172	74.16	167	1007	101
42	39	678	R 3	3	M	2705	2605	441	321	263	223	60.26	150	1080	100
42	40	679	C	1	F	2391	2283	354	251	222	159	59.53	292	879	108
42	40	680	C	1	F	2601	2456	490	296	244	219	61.13	201	898	145
42	41	681	R 7	4	M	2539	2444	277	282	229	203	70.88	168	1148	95
42	41	682	R 7	4	M	2883	2783	366	312	280	201	65.75	174	1329	100
42	42	683	R 7	2	F	2287	2169	324	259	197	182	54.89	227	892	118

42	42	684	R 7	2	F	2866	2746	385	310	224	226	70.26	198	1232	120
42	43	685	C	3	M	3149	3026	487	404	290	246	70.88	194	1272	123
42	43	686	C	3	M	2917	2807	554	352	271	202	67.41	160	1113	110
42	44	687	R 7	4	F	2482	2384	335	293	220	182	83.76	164	1036	98
42	44	688	R 7	4	F	2573	2477	330	286	222	198	72.23	223	992	96
42	45	689	R 3	4	M	2421	2340	303	310	237	185	62.71	145	1021	81
42	45	690	R 3	4	M	2752	2592	313	250	289	231	74.98	159	1134	160
42	46	691	R 3	3	F	2369	2269	345	269	239	167	62.26	217	932	100
42	46	692	R 3	3	F	2598	2470	347	287	218	180	69.75	225	1077	128
42	47	693	C	4	M	2382	2293	331	280	214	189	70.18	143	994	89
42	47	694	C	4	M	3052	2945	484	356	294	203	71.42	209	1200	107
42	48	695	R 3	2	F	2575	2461	378	293	219	190	68.68	241	1009	114
42	48	696	R 3	2	F	2341	2219	358	202	251	177	62.93	214	912	122

Age	Pen	Code	Strain	Feed	Sex	St*sex	St*feed	Sex*feed	St*Sx*Fd	Weight	Breast	Thighs	Drums	Wings	Liver	Gut	Remain	feathers	water	protein	lipid	ln protein
1			C		F					56	-0.69315	0.916291	0.916291	-0.28768	0	2.564949	3.332205	*	42.0	8.8	3.3	2.169
1			C		F					47	-0.69315	0.559616	0.693147	0	0	2.442347	3.020425	*	34.9	7.3	2.7	1.983
1			C		F					46	-0.69315	0.693147	0.405465	0	0	2.140066	3.218876	*	34.5	7.2	2.7	1.973
1			C		F					47	-0.69315	0.559616	0.693147	0	0	2.442347	3.198673	*	35.2	7.3	2.7	1.994
1			C		F					47	-0.69315	0.559616	0.559616	0	0.405465	2.397895	3.198673	*	34.9	7.3	2.7	1.983
1			C		F					48	-0.69315	0.405465	0.559616	-0.28768	0	2.525729	3.113515	*	35.6	7.4	2.8	2.005
1			C		M					45	0	0.405465	0.559616	0	0.405465	2.442347	3.135494	*	33.7	6.6	2.8	1.888
1			C		M					45	-0.69315	0.405465	0.916291	-0.28768	0	2.197225	3.178054	*	33.7	6.6	2.8	1.888
1			C		M					44	-0.69315	0.693147	0.559616	0	0	2.351375	3.157	*	33.0	6.5	2.7	1.866
1			C		M					45	-0.69315	0.559616	0.693147	-0.28768	0.405465	2.079442	3.178054	*	33.7	6.6	2.8	1.888
1			C		M					45	-0.69315	0.81093	0.405465	-0.28768	0	2.197225	3.157	*	33.7	6.6	2.8	1.888
1			C		M					44	-0.91629	0.559616	0.693147	0	0.405465	2.251292	3.135494	*	33.0	6.5	2.7	1.866
1			R 3		F					48	-0.69315	0.81093	0.559616	0	0	2.397895	3.198673	*	36.4	7.3	2.0	1.988
1			R 3		F					44	-0.69315	0.559616	0.405465	0	0	2.251292	3.135494	*	33.7	6.8	1.9	1.912
1			R 3		F					49	-0.69315	0.81093	0.559616	0	0	2.351375	3.277145	*	37.5	7.5	2.1	2.019
1			R 3		F					47	-0.69315	0.559616	0.693147	-0.28768	0	2.197225	3.258097	*	36.0	7.2	2.0	1.978
1			R 3		F					48	-0.69315	0.854415	0.788457	0.262364	0.336472	2.014903	3.265759	*	37.0	7.4	2.1	2.007
1			R 3		F					40	-0.69315	0.438255	0.615186	-0.28768	0.09531	1.902108	2.965273	*	30.2	6.1	1.7	1.804
1			R 3		M					48	-0.35667	0.667829	0.641854	0.09531	0	2.208274	3.288402	*	36.8	7.4	2.6	2.002
1			R 3		M					40	-0.51083	0.641854	0.470004	0	-0.22314	1.94591	3.005683	*	30.2	6.1	2.1	1.803
1			R 3		M					41	-0.69315	0.470004	0.615186	-0.16252	-0.35667	2.091864	3.148453	*	31.4	6.3	2.2	1.841
1			R 3		M					41	-0.22314	0.788457	0.587787	0.223144	0.09531	2.00148	3.044522	*	31.5	6.3	2.2	1.845
1			R 3		M					41	-0.91629	0.336472	0.641854	-0.35667	0.09531	2.116256	3.135494	*	31.3	6.3	2.2	1.838
1			R 3		M					41	-0.69315	0.615186	0.530628	0	0.09531	1.94591	3.100092	*	33.3	6.3	2.2	1.843
1			R 7		F					41	-0.69315	0.500775	0.500775	-0.22314	-0.10536	2.140066	3.086487	*	32.9	4.4	1.7	1.485
1			R 7		F					47	-0.91629	0.559616	0.667829	0.300105	0.09531	2.557227	3.086487	*	38.4	5.2	2.0	1.640
1			R 7		F					38	-0.91629	0.300105	0.438255	-0.22314	-0.35667	1.960095	3.077312	*	30.7	4.1	1.6	1.417
1			R 7		F					40	-0.91629	0.667829	0.470004	0.223144	0	2.04122	2.995732	*	32.5	4.4	1.7	1.473
1			R 7		F					52	-0.69315	0.438255	0.765468	0	0.262364	2.549445	3.273364	*	41.8	5.6	2.1	1.727
1			R 7		F					38	-0.91629	0.615186	0.262364	-0.22314	0	1.960095	2.960105	*	29.1	4.1	1.6	1.417
1			R 7		M					45	-0.69315	0.788457	0.470004	-0.22314	0.262364	2.054124	3.238678	*	34.7	7.0	2.3	1.939
1			R 7		M					38	-0.69315	0.182322	0.470004	-0.05129	0	2.197225	2.985682	*	29.5	5.9	1.9	1.778
1			R 7		M					45	-0.51083	0.641854	0.587787	-0.28768	-0.69315	2.302585	3.182212	*	34.2	6.9	2.3	1.926
1			R 7		M					42	-0.91629	0.500775	0.641854	0.04879	0.09531	2.054124	3.049273	*	32.0	6.4	2.1	1.858
1			R 7		M					44	-0.69315	0.615186	0.641854	-0.10536	0.182322	2.140066	3.173878	*	33.9	6.8	2.2	1.917
1			R 7		M					44	-0.91629	0.741937	0.470004	0.139762	0.09531	2.174752	3.144152	*	34.0	6.8	2.2	1.921
7	1	11	R 3	2	M	3M	32	2M	3M2	177	2.753661	2.174752	2.079442	1.578979	1.871802	3.520461	4.316154	0	32.1	26.3	2.0	3.2680
7	1	12	R 3	2	M	3M	32	2M	3M2	175	2.667228	2.230014	2.04122	1.713798	1.504077	3.487375	4.283587	0	32.3	24.8	2.8	3.2102
7	2	13	R 3	1	F	3F	31	1F	3F1	174	2.714695	2.433613	1.783391	1.879465	1.84055	3.417727	4.26268	0.693147	31.7	25.7	2.6	3.2461
7	2	14	R 3	1	F	3F	31	1F	3F1	168	2.509599	2.174752	1.824549	1.619388	2.00148	3.453157	4.280824	0.693147	31.3	26.0	2.5	3.2595
7	3	15	R 7	2	M	7M	72	2M	7M2	156	2.533697	2.066863	1.766442	1.547563	1.791759	3.433987	4.197202	0	31.0	24.3	2.9	3.1907
7	3	16	R 7	2	M	7M	72	2M	7M2	205	2.791165	2.186051	2.128232	1.740466	2.341806	3.708682	4.472781	0	30.9	29.7	3.3	3.3902
7	4	17	C	3	F	CF	C3	3F	CF3	192	2.797281	2.302585	2.021548	1.916923	2.00148	3.594569	4.373238	0.693147	32.6	28.8	4.5	3.3591
7	4	18	C	3	F	CF	C3	3F	CF3	199	2.753661	2.104134	2.134166	1.619388	2.272126	3.632309	4.487512	0.693147	31.3	29.7	3.2	3.3909
7	5	19	C	2	M	CM	C2	2M	CM2	203	2.785011	2.327278	2.054124	1.800058	2.261763	3.720862	4.410371	1.098612	36.0	26.9	2.6	3.2914
7	5	110	C	2	M	CM	C2	2M	CM2	200	2.827314	2.595255	2.04122	1.832581	1.94591	3.751854	4.302713	0.693147	34.2	29.4	2.5	3.3811
7	6	111	C	2	F	CF	C2	2F	CF2	237	2.939162	2.489065	2.277267	2.140066	2.174752	3.89995	4.532599	1.098612	34.3	35.8	2.7	3.5772
7	6	112	C	2	F	CF	C2	2F	CF2	186	2.631889	2.008214	1.916923	1.783391	2.104134	3.666122	4.363099	1.098612	28.4	28.2	2.4	3.3379
7	7	113	R 7	1	M	7M	71	1M	7M1	165	2.639057	1.967112	2.014903	1.504077	1.791759	3.572346	4.239887	0	35.5	24.2	2.4	3.1849
7	7	114	R 7	1	M	7M	71	1M	7M1	148	2.4681	1.7492	1.800058	1.360977	1.824549	3.430756	4.191169	0	29.4	21.5	2.1	3.0665
7	8	115	R 3	4	F	3F	34	4F	3F4	141	2.208274	1.967112	1.536867	1.515127	1.757858	3.190476	4.19419	0.693147	30.2	19.6	2.2	2.9740
7	8	116	R 3	4	F	3F	34	4F	3F4	184	2.424803	2.197225	2.014903	1.816452	2.251292	3.508556	4.394449	0	29.1	25.8	3.9	3.2491
7	9	117	C	1	M	CM	C1	1M	CM1	182	2.687847	2.151762	2.145931	1.722767	2.00148	3.563883	4.308111	0.693147	31.0	25.7	1.7	3.2458
7	9	118	C	1	M	CM	C1	1M	CM1	186	2.61007	2.246015	1.832581	1.902108	1.88707	3.597312	4.406719	0	30.1	27.6	1.5	3.3161
7	10	119	R 7	1	F	7F	71	1F	7F1	164	2.66026	2.098018	1.88707	1.713798	1.960095	3.48124	4.201703	0.693147	30.0	24.3	1.2	3.1908
7	10	120	R 7	1	F	7F	71	1F	7F1	175	2.509599	1.9947	2.008214	1.658228	2.079442	3.54674	4.322807	0.693147	34.9	26.5	2.0	3.2755
7	11	121	R 3	1	M	3M	31	1M	3M1	175	2.815409	2.360854	1.902108	1.740466	2.054124	3.407842	4.287716	#NUM!	27.9	26.0	2.0	3.2575

7	11	122	R 3	1	M	3M	31	1M	3M1	165	2.639057	2.060514	1.808289	1.832581	1.902108	3.367296	4.280824	0	28.9	25.2	2.3	3.2279
7	12	123	C	4	F	CF	C4	4F	CF4	179	2.476538	2.028148	2.00148	1.731656	2.219203	3.523415	4.380776	0.693147	36.7	25.1	4.2	3.2244
7	12	124	C	4	F	CF	C4	4F	CF4	195	2.766319	2.282382	2.047693	1.848455	2.580217	3.618993	4.348987	0.693147	26.5	27.7	3.5	3.3229
7	13	125	R 3	4	M	3M	34	4M	3M4	166	2.014903	2.140066	1.88707	1.766442	1.987874	3.459466	4.325456	0	32.4	23.2	3.3	3.1440
7	13	126	R 3	4	M	3M	34	4M	3M4	134	1.916923	1.848455	1.731656	1.373716	1.856298	3.258097	4.112512	0	27.2	18.8	3.1	2.9360
7	14	127	R 3	4	F	3F	34	4F	3F4	175	2.261763	2.163323	1.88707	2.021548	2.208274	3.496508	4.290459	0.693147	30.9	25.3	4.0	3.2290
7	14	128	R 3	4	F	3F	34	4F	3F4	146	1.774952	1.774952	1.808289	1.599388	2.04122	3.325036	4.207673	0.693147	29.0	21.0	4.0	3.0438
7	15	129	R 7	4	M	7M	74	4M	7M4	162	2.406945	2.091864	1.88707	1.667707	1.757858	3.377588	4.301359	0	31.3	23.0	3.8	3.1368
7	15	130	R 7	4	M	7M	74	4M	7M4	166	2.360854	1.871802	1.94591	1.667707	2.282382	3.397858	4.316154	0	27.7	26.3	8.8	3.2680
7	16	131	R 7	1	F	7F	71	1F	7F1	177	2.525729	2.186051	1.894617	1.909543	1.902108	3.526361	4.348987	0.693147	128.1	26.5	8.0	3.2781
7	16	132	R 7	1	F	7F	71	1F	7F1	196	2.66026	2.277267	2.00148	2.008214	2.014903	3.624341	4.439116	0	124.0	29.7	13.4	3.3912
7	17	133	R 3	2	M	3M	32	2M	3M2	180	2.501436	2.128232	2.008214	1.879465	2.079442	3.608212	4.318821	0	126.6	26.0	10.9	3.2583
7	17	134	R 3	2	M	3M	32	2M	3M2	183	2.76001	2.163323	1.938742	1.824549	1.931521	3.650658	4.31348	0	121.9	21.8	11.3	3.0840
7	18	135	C	2	F	CF	C2	2F	CF2	200	2.80336	2.341806	1.909543	1.938742	2.219203	3.597312	4.446174	0.693147	111.4	29.1	11.5	3.3699
7	18	136	C	2	F	CF	C2	2F	CF2	192	2.694627	2.104134	2.079442	1.774952	2.208274	3.605498	4.418841	0.693147	149.9	28.0	12.9	3.3314
7	19	137	C	4	M	CM	C4	4M	CM4	156	2.397895	2.008214	1.916923	1.800058	1.856298	3.339322	4.189655	0.693147	136.6	22.6	15.0	3.1161
7	19	138	C	4	M	CM	C4	4M	CM4	160	2.388763	2.008214	1.816452	1.731656	2.066863	3.453157	4.215086	0.693147	141.4	23.1	13.9	3.1405
7	20	139	R 3	3	F	3F	33	3F	3F3	186	2.653242	2.287471	2.047693	1.981001	2.312535	3.566712	4.291828	0.693147	138.4	28.5	20.4	3.3490
7	20	140	R 3	3	F	3F	33	3F	3F3	179	2.639057	1.938742	2.00148	1.86408	2.116256	3.505557	4.368181	1.098612	142.7	27.0	14.5	3.2941
7	21	141	R 7	2	M	7M	72	2M	7M2	188	2.541602	2.251292	2.104134	1.88707	1.960095	3.597312	4.384524	0	173.0	26.9	13.4	3.2912
7	21	142	R 7	2	M	7M	72	2M	7M2	162	2.549445	1.894617	1.94591	1.740466	1.774952	3.411148	4.284965	#NUM!	131.7	24.4	10.3	3.1958
7	22	143	R 7	3	F	7F	73	3F	7F3	144	1.987874	1.871802	1.686399	1.731656	1.667707	3.328627	4.19268	0	121.2	20.5	6.7	3.0186
7	22	144	R 7	3	F	7F	73	3F	7F3	173	2.541602	2.060514	1.88707	1.7492	2.116256	3.505557	4.32148	0.693147	107.1	24.7	9.9	3.2067
7	23	145	R 3	3	M	3M	33	3M	3M3	143	2.163323	1.924249	1.7492	1.599388	1.791759	3.317816	4.157319	0	103.6	20.1	9.5	2.9991
7	23	146	R 3	3	M	3M	33	3M	3M3	156	2.442347	2.085672	1.783391	1.658228	1.774952	3.407842	4.220977	#NUM!	133.1	22.1	12.9	3.0958
7	24	147	R 7	4	F	7F	74	4F	7F4	152	2.261763	2.054124	1.648659	1.677097	1.871802	3.401197	4.183576	0.693147	127.1	22.4	13.9	3.1079
7	24	148	R 7	4	F	7F	74	4F	7F4	154	2.251292	1.848455	1.7492	1.619388	1.824549	3.493473	4.218036	0.693147	133.6	22.3	11.0	3.1026
7	25	149	R 7	1	M	7M	71	1M	7M1	150	2.484907	1.894617	1.909543	1.638997	1.871802	3.443618	4.114147	#NUM!	124.9	21.4	5.3	3.0621
7	25	150	R 7	1	M	7M	71	1M	7M1	159	2.60269	2.122262	1.677097	1.686399	2.028148	3.443618	4.201703	#NUM!	129.1	23.5	6.6	3.1572
7	26	151	C	1	F	CF	C1	1F	CF1	167	2.694627	1.924249	1.88707	1.695616	1.94591	3.540959	4.248495	0.693147	127.5	24.6	11.1	3.2046
7	26	152	C	1	F	CF	C1	1F	CF1	192	2.70805	2.054124	2.098018	1.832581	2.197225	3.683867	4.375757	1.098612	121.8	28.3	7.6	3.3435
7	27	153	R 7	3	M	7M	73	3M	7M3	148	2.292535	1.902108	1.667707	1.578979	2.04122	3.387774	4.166665	0	129.5	21.1	12.5	3.0481
7	27	154	R 7	3	M	7M	73	3M	7M3	158	2.415914	1.974081	1.774952	1.589235	2.04122	3.566712	4.185099	0	142.9	22.3	10.4	3.1067
7	28	155	C	4	F	CF	C4	4F	CF4	170	2.501436	2.145931	1.909543	1.704748	2.014903	3.437208	4.312141	0.693147	116.8	24.3	12.2	3.1886
7	28	156	C	4	F	CF	C4	4F	CF4	145	2.251292	1.731656	1.658228	1.435085	2.054124	3.433987	4.16356	0	95.3	21.9	9.3	3.0857
7	29	157	C	3	M	CM	C3	3M	CM3	162	2.332144	2.008214	1.848455	1.609438	2.054124	3.594569	4.198705	0.693147	128.7	24.0	10.6	3.1763
7	29	158	C	3	M	CM	C3	3M	CM3	156	2.332144	1.871802	1.740466	1.446919	1.960095	3.64545	4.166665	0.693147	106.2	23.0	7.7	3.1338
7	30	159	R 7	2	F	7F	72	2F	7F2	152	2.541602	1.987874	1.84055	1.695616	1.960095	3.453157	4.079231	0.693147	117.5	21.8	8.4	3.0819
7	30	160	R 7	2	F	7F	72	2F	7F2	168	2.821379	1.967112	2.014903	1.808289	2.484907	3.508556	4.282206	0	115.9	25.5	14.2	3.2379
7	31	161	R 3	1	M	3M	31	1M	3M1	202	2.809403	2.388763	2.028148	1.832581	2.04122	3.637586	4.470495	#NUM!	128.8	29.4	9.5	3.3804
7	31	162	R 3	1	M	3M	31	1M	3M1	184	2.639057	2.186051	2.066863	1.816452	2.04122	3.569533	4.369448	0	144.7	27.6	9.6	3.3165
7	32	163	C	3	F	CF	C3	3F	CF3	189	2.646175	2.277267	2.066863	1.871802	2.251292	3.65584	4.316154	0.693147	129.7	26.7	15.7	3.2863
7	32	164	C	3	F	CF	C3	3F	CF3	208	2.862201	2.169054	2.091864	2.00148	2.388763	3.683867	4.458988	1.098612	126.6	32.1	15.6	3.4690
7	33	165	C	2	M	CM	C2	2M	CM2	208	2.631889	2.24071	2.122262	1.981001	2.251292	3.668677	4.520701	0.693147	145.8	30.4	11.9	3.4159
7	33	166	C	2	M	CM	C2	2M	CM2	200	2.80336	2.224624	2.047693	1.974081	2.128232	3.632309	4.436752	1.098612	138.7	30.4	11.3	3.4130
7	34	167	R 3	2	F	3F	32	2F	3F2	201	2.70805	2.24071	2.00148	1.924249	2.261763	3.583519	4.494239	0.693147	111.7	31.2	9.8	3.4416
7	34	168	R 3	2	F	3F	32	2F	3F2	186	2.687847	2.219203	2.008214	1.800058	2.163323	3.499533	4.405499	0	115.6	26.8	11.9	3.2878
7	35	169	C	1	M	CM	C1	1M	CM1	201	2.61007	2.208274	2.091864	1.938742	2.104134	3.804438	4.423648	0.693147	138.4	30.1	7.4	3.4060
7	35	170	C	1	M	CM	C1	1M	CM1	190	2.850707	2.157559	2.04122	1.88707	1.88707	3.637586	4.382027	0.693147	131.9	28.0	10.8	3.3335
7	36	171	R 3	1	F	3F	31	1F	3F1	165	2.557227	2.134166	1.832581	1.808289	1.88707	3.411148	4.25703	0.693147	138.0	24.9	9.9	3.2143
7	36	172	R 3	1	F	3F	31	1F	3F1	191	2.772589	2.174752	2.047693	1.848455	2.054124	3.529297	4.437934	0.693147	118.8	28.5	8.2	3.3486
7	37	173	R 7	3	M	7M	73	3M	7M3	169	2.484907	2.04122	1.953028	1.658228	1.931521	3.490429	4.306764	1.098612	103.4	24.9	9.9	3.2155
7	37	174	R 7	3	M	7M	73	3M	7M3	175	2.4681	1.94591	1.967112	1.757858	2.208274	3.561046	4.32148	0.693147	125.8	25.4	14.1	3.2366
7	38	175	R 7	3	F	7F	73	3F	7F3	146	2.282382	1.894617	1.695616	1.7492	1.722767	3.314186	4.165114	0.693147	102.4	21.6	9.3	3.0747
7	38	176	R 7	3	F	7F	73	3F	7F3	173	2.484907	2.00148	1.94591	1.894617	1.916923	3.511545	4.31348	0.693147	112.6	25.1	11.4	3.2210
7	39	177	R 3	3	M	3M	33	3M	3M3	177	2.587764	2.116256	2.054124	1.619388	1.916923	3.563883	4.348987	0	109.5	26.1	11.8	3.2613
7	39	178	R 3	3	M	3M	33	3M	3M3	186	2.624669	2.140066	1.938742	1.824549	2.116256	3.549617	4.428433	0	109.0	27.7	13.5	3.3214
7	40	179	C	1	F	CF	C1	1F	CF1	200	2.74084	2.169054	2.128232	1.960095	2.282382	3.732896	4.400603	0.693147	107.9	29.7	10.1	3.3905

7	40	180	C	1	F	CF	C1	1F	CF1	183	2.727853	2.110213	2.047693	1.791759	2.028148	3.508556	4.384524	0.693147	116.3	29.1	10.0	3.3699
7	41	181	R 7	4	M	7M	74	4M	7M4	142	2.230014	1.808289	1.667707	1.547563	1.974081	3.394508	4.136765	#NUM!	119.1	21.5	8.1	3.0685
7	41	182	R 7	4	M	7M	74	4M	7M4	194	2.687847	2.180417	2.163323	1.816452	2.322388	3.566712	4.447346	#NUM!	136.1	27.6	17.3	3.3167
7	42	183	R 7	2	F	7F	72	2F	7F2	170	2.572612	1.974081	1.800058	1.894617	2.066863	3.514526	4.284965	0.693147	105.9	25.6	8.6	3.2441
7	42	184	R 7	2	F	7F	72	2F	7F2	179	2.681022	2.151762	1.924249	1.774952	2.066863	3.580737	4.316154	0.693147	114.9	26.0	10.1	3.2571
7	43	185	C	3	M	CM	C3	3M	CM3	188	2.714695	2.034706	2.00148	1.916923	2.091864	3.713572	4.352855	0.693147	124.0	27.1	9.6	3.2980
7	43	186	C	3	M	CM	C3	3M	CM3	161	2.360854	2.060514	1.713798	1.648659	2.054124	3.589059	4.198705	0.693147	103.1	23.5	12.4	3.1561
7	44	187	R 7	4	F	7F	74	4F	7F4	172	2.541602	1.924249	1.816452	1.7492	2.261763	3.514526	4.312141	0.693147	117.2	25.2	7.4	3.2269
7	44	188	R 7	4	F	7F	74	4F	7F4	147	2.163323	1.722767	1.931521	1.619388	2.079442	3.349904	4.152613	0.693147	107.2	23.1	11.2	3.1406
7	45	189	R 3	4	M	3M	34	4M	3M4	152	2.151762	2.098018	1.740466	1.619388	1.648659	3.332205	4.259859	#NUM!	109.5	20.9	11.8	3.0388
7	45	190	R 3	4	M	3M	34	4M	3M4	139	2.140066	1.816452	1.704748	1.558145	1.740466	3.303217	4.155753	#NUM!	120.5	20.4	10.7	3.0144
7	46	191	R 3	3	F	3F	33	3F	3F3	186	2.646175	2.208274	2.021548	1.848455	2.186051	3.569533	4.360548	0.693147	146.9	29.5	10.4	3.3834
7	46	192	R 3	3	F	3F	33	3F	3F3	154	2.322388	1.938742	1.832581	1.658228	1.84055	3.411148	4.219508	0.693147	133.0	21.7	13.0	3.0782
7	47	193	C	4	M	CM	C4	4M	CM4	175	2.406945	2.034706	2.085672	1.953028	2.197225	3.487375	4.304065	0.693147	136.9	24.2	15.8	3.1846
7	47	194	C	4	M	CM	C4	4M	CM4	182	2.388763	1.987874	1.931521	1.667707	2.230014	3.71113	4.371976	0.693147	150.2	25.2	15.4	3.2266
7	48	195	R 3	2	F	3F	32	2F	3F2	157	2.484907	2.014903	1.816452	1.816452	1.974081	3.468856	4.175925	0.693147	151.8	23.1	9.9	3.1380
7	48	196	R 3	2	F	3F	32	2F	3F2	149	2.484907	1.916923	1.704748	1.619388	1.987874	3.437208	4.135167	0	145.0	22.2	10.4	3.1008
14	1	201	R 3	2	M	3M	32	2M	3M2	419	3.846738	2.974509	2.945754	2.366967	2.465554	4.006242	5.247024	1.386294	142.9	67.0	14.5	4.2040
14	1	202	R 3	2	M	3M	32	2M	3M2	557	4.033355	3.375709	3.243568	3.1394	2.956991	3.953357	5.529429	1.386294	126.8	89.4	19.0	4.4931
14	2	203	R 3	1	F	3F	31	1F	3F1	366	3.725693	2.986187	2.661657	2.691921	2.448416	3.641001	5.081404	2.032088	143.1	57.9	14.5	4.0594
14	2	204	R 3	1	F	3F	31	1F	3F1	431	3.720136	3.026019	3.048799	2.941276	2.692598	4.043753	5.187386	2.397895	136.1	70.3	11.8	4.2531
14	3	205	R 7	2	M	7M	72	2M	7M2	478	3.912623	3.165897	3.050457	2.865054	2.799717	3.860098	5.398163	1.791759	115.3	74.8	14.2	4.3154
14	3	206	R 7	2	M	7M	72	2M	7M2	422	3.606584	3.196221	2.934123	2.973487	2.626117	3.814851	5.247024	#NUM!	135.8	66.7	13.1	4.2004
14	4	207	C	3	F	CF	C3	3F	CF3	486	4.044804	3.279971	3.005187	2.872151	2.740195	3.930648	5.347108	2.564949	115.1	76.0	18.2	4.3302
14	4	208	C	3	F	CF	C3	3F	CF3	473	3.815512	3.14329	2.957511	2.960623	2.762538	3.827771	5.379897	2.890372	120.8	73.6	17.3	4.2988
14	5	209	C	2	M	CM	C2	2M	CM2	537	4.101817	3.342332	3.088995	2.929058	2.796671	4.056989	5.46806	2.484907	102.0	84.7	12.8	4.4386
14	5	210	C	2	M	CM	C2	2M	CM2	428	3.737431	3.091497	2.876667	2.923162	2.403335	3.861992	5.241747	2.302585	125.0	70.0	9.6	4.2485
14	6	211	C	2	F	CF	C2	2F	CF2	556	4.105285	3.485079	3.186766	3.070376	2.820188	4.081428	5.472271	2.484907	119.1	85.7	18.6	4.4505
14	6	212	C	2	F	CF	C2	2F	CF2	475	3.671988	3.164208	2.980619	2.918581	2.702703	3.934762	5.389072	2.639057	127.3	76.1	17.5	4.3316
14	7	213	R 7	1	M	7M	71	1M	7M1	533	4.06971	3.356897	3.205791	3.041184	2.963209	4.009331	5.442418	2.302585	142.8	86.8	12.3	4.4633
14	7	214	R 7	1	M	7M	71	1M	7M1	524	4.087991	3.414443	3.158064	3.13201	2.848392	3.931041	5.389072	1.94591	131.2	86.2	10.8	4.4569
14	8	215	R 3	4	F	3F	34	4F	3F4	348	3.506758	2.940748	2.790858	2.636196	2.424803	3.598955	5.010635	2.197225	99.4	51.3	13.5	3.9384
14	8	216	R 3	4	F	3F	34	4F	3F4	421	3.558771	3.297132	2.766005	2.818398	2.530517	3.741472	5.26269	2.484907	129.7	66.5	23.8	4.1969
14	9	217	C	1	M	CM	C1	1M	CM1	518	4.194492	3.255401	3.074774	2.985682	2.88759	3.89914	5.402677	2.639057	126.1	86.2	8.0	4.4565
14	9	218	C	1	M	CM	C1	1M	CM1	562	4.015121	3.37194	3.268428	3.098063	2.944439	4.041295	5.505332	2.772589	128.6	88.5	11.5	4.4834
14	10	219	R 7	1	F	7F	71	1F	7F1	449	3.912423	3.147595	3.028441	2.834683	2.737609	3.870159	5.267858	2.397895	132.1	73.7	14.1	4.3003
14	10	220	R 7	1	F	7F	71	1F	7F1	463	3.915417	3.170106	2.994231	2.847232	2.794839	3.792789	5.342334	2.564949	112.4	75.7	11.4	4.3272
14	11	221	R 3	1	M	3M	31	1M	3M1	514	4.044454	3.34127	3.087399	3.075698	2.953868	3.99765	5.393628	2.564949	123.6	81.1	11.4	4.3957
14	11	222	R 3	1	M	3M	31	1M	3M1	527	4.044103	3.227836	3.141995	2.950212	2.955951	4.010782	5.488938	2.302585	101.9	85.4	12.5	4.4471
14	12	223	C	4	F	CF	C4	4F	CF4	440	3.677313	3.140482	2.926382	2.867331	2.727853	3.807995	5.278115	2.397895	103.4	64.5	17.4	4.1672
14	12	224	C	4	F	CF	C4	4F	CF4	467	3.825593	3.29101	3.046188	2.867899	2.841415	3.836868	5.308268	2.484907	92.8	73.3	16.5	4.2939
14	13	225	R 3	4	M	3M	34	4M	3M4	473	3.55134	3.198061	3.01676	2.838493	2.858766	3.993972	5.407172	2.079442	126.4	68.9	19.5	4.2320
14	13	226	R 3	4	M	3M	34	4M	3M4	501	3.825593	3.339322	3.083972	2.959846	2.948641	4.046729	5.402677	1.94591	103.6	76.6	16.4	4.3392
14	14	227	R 3	4	F	3F	34	4F	3F4	401	3.639952	2.9614	2.949165	2.75111	2.672078	3.718196	5.209486	2.397895	117.0	60.8	20.1	4.1074
14	14	228	R 3	4	F	3F	34	4F	3F4	320	3.206803	2.756523	2.641198	2.571084	2.234306	3.642312	4.990433	2.302585	128.3	48.8	14.7	3.8873
14	15	229	R 7	4	M	7M	74	4M	7M4	323	3.306154	2.81989	2.661657	2.552955	2.455306	3.413126	5.036953	1.609438	107.5	48.9	15.5	3.8894
14	15	230	R 7	4	M	7M	74	4M	7M4	337	3.199081	2.906281	2.576041	2.668269	2.492379	3.656873	5.056246	1.791759	104.5	50.2	11.9	3.9158
14	16	231	R 7	1	F	7F	71	1F	7F1	498	3.985459	3.203559	3.025291	2.937043	2.822569	3.947776	5.370638	2.639057	295.5	79.2	32.8	4.3722
14	16	232	R 7	1	F	7F	71	1F	7F1	409	3.730981	3.001466	2.965015	2.865624	2.596746	3.693369	5.170484	2.484907	394.6	63.8	36.4	4.1556
14	17	233	R 3	2	M	3M	32	2M	3M2	448	3.983599	3.181797	3.048325	2.901971	2.622492	3.758872	5.241747	1.791759	258.6	71.7	26.3	4.2727
14	17	234	R 3	2	M	3M	32	2M	3M2	445	3.810876	3.214466	2.97553	2.909084	2.651833	3.824721	5.267858	2.079442	305.4	69.6	31.5	4.2424
14	18	235	C	2	F	CF	C2	2F	CF2	480	3.938081	3.233173	3.044046	2.912079	2.747271	3.93652	5.337538	2.564949	334.9	75.9	41.5	4.3296
14	18	236	C	2	F	CF	C2	2F	CF2	562	4.168988	3.315276	3.190682	3.094672	2.892037	4.067658	5.497168	2.564949	290.1	88.3	39.6	4.4813
14	19	237	C	4	M	CM	C4	4M	CM4	483	3.987316	3.20741	2.926382	2.92986	2.816606	3.902175	5.379897	2.639057	324.7	75.3	58.3	4.3220
14	19	238	C	4	M	CM	C4	4M	CM4	513	3.952397	3.282038	3.102791	2.972719	2.938103	3.936325	5.402677	2.397895	325.0	#VALUE! *	*	
14	20	239	R 3	3	F	3F	33	3F	3F3	547	4.037774	3.277711	3.175968	3.007908	2.978586	4.032824	5.484797	2.564949	363.2	87.4	63.7	4.4701
14	20	240	R 3	3	F	3F	33	3F	3F3	463	3.813748	3.094672	3.133536	2.968618	2.828496	3.842244	5.308268	2.564949	288.8	74.0	53.7	4.3047
14	21	241	R 7	2	M	7M	72	2M	7M2	500	3.988243	3.282977	3.018716	2.918581	2.852439	3.988984	5.402677	1.549688	396.1	80.1	38.8	4.3828

14	21	242	R 7	2	M	7M	72	2M	7M2	454	4.026601	3.082827	3.008155	2.830563	2.714695	3.850998	5.298317	1.791759	332.3	71.7	40.0	4.2727
14	22	243	R 7	3	F	7F	73	3F	7F3	407	3.818811	2.924773	2.910719	2.766319	2.647592	3.626738	5.204007	2.484907	369.6	65.3	59.0	4.1784
14	22	244	R 7	3	F	7F	73	3F	7F3	441	3.901569	3.032546	2.925846	2.82524	2.710048	3.810212	5.267858	2.397895	354.9	71.5	63.0	4.2702
14	23	245	R 3	3	M	3M	33	3M	3M3	370	3.587677	3.075005	2.780061	2.726218	2.524127	3.75115	5.075174	1.609438	246.8	61.2	22.2	4.1134
14	23	246	R 3	3	M	3M	33	3M	3M3	419	3.825375	3.000969	3.012835	2.727853	2.57032	3.827989	5.220356	1.94591	298.4	68.2	33.3	4.2231
14	24	247	R 7	4	F	7F	74	4F	7F4	415	3.685624	3.012098	2.903069	2.78161	2.672078	3.809104	5.236442	2.397895	347.5	63.9	65.5	4.1571
14	24	248	R 7	4	F	7F	74	4F	7F4	380	3.617115	2.940748	2.736962	2.729485	2.770086	3.734331	5.117994	2.484907	375.8	59.5	79.0	4.0856
14	25	249	R 7	1	M	7M	71	1M	7M1	448	3.963666	2.967333	2.985934	2.900047	2.744704	4.043227	5.214936	2.564949	323.1	73.2	28.8	4.2936
14	25	250	R 7	1	M	7M	71	1M	7M1	*	*	3.056827	3.080073	2.901971	2.825537	3.946038	5.247024	#VALUE!	331.1	0.0	36.9	#NUM!
14	26	251	C	1	F	CF	C1	1F	CF1	495	6.171701	3.149311	3.186972	2.938103	2.833213	3.84203	5.361292	2.772589	374.0	78.1	30.9	4.3586
14	26	252	C	1	F	CF	C1	1F	CF1	472	6.12905	3.181797	3.056592	2.897016	2.788708	3.828859	5.308268	2.564949	369.4	77.7	47.4	4.3528
14	27	253	R 7	3	M	7M	73	3M	7M3	444	6.075346	3.085116	3.118392	2.876667	2.525729	4.020877	5.220356	2.197225	305.3	71.9	39.5	4.2756
14	27	254	R 7	3	M	7M	73	3M	7M3	397	5.971262	3.001217	2.932526	2.758109	2.598979	3.811097	5.17615	1.609438	326.1	63.1	39.1	4.1453
14	28	255	C	4	F	CF	C4	4F	CF4	440	6.059123	3.097612	2.964242	2.851284	2.694627	3.769999	5.247024	2.484907	312.7	69.1	65.5	4.2357
14	28	256	C	4	F	CF	C4	4F	CF4	461	6.098074	3.182419	2.927721	2.901971	3.024806	3.703768	5.32301	2.772589	335.5	70.7	64.1	4.2587
14	29	257	C	3	M	CM	C3	3M	CM3	536	6.259581	3.374682	3.178054	3.063157	2.778198	4.002595	5.459586	2.564949	276.9	81.5	40.7	4.4012
14	29	258	C	3	M	CM	C3	3M	CM3	491	6.173786	3.23534	3.094219	2.841415	2.716018	3.749033	5.356586	2.397895	219.0	80.2	33.0	4.3844
14	30	259	R 7	2	F	7F	72	2F	7F2	505	6.194405	3.190065	3.15955	2.980619	2.745988	3.964426	5.361292	2.70805	222.6	81.4	35.7	4.3995
14	30	260	R 7	2	F	7F	72	2F	7F2	452	6.066108	3.110399	3.046901	2.99373	2.708717	3.740997	5.273	3.044522	234.8	76.1	31.6	4.3319
14	31	261	R 3	1	M	3M	31	1M	3M1	528	6.257668	3.353582	3.164208	3.014063	2.999724	4.163404	5.393628	1.791759	352.1	85.1	39.7	4.4434
14	31	262	R 3	1	M	3M	31	1M	3M1	439	6.063785	3.051876	2.994732	2.788093	2.634045	3.700314	5.288267	2.197225	283.5	71.2	36.3	4.2649
14	32	263	C	3	F	CF	C3	3F	CF3	469	6.120297	3.013081	3.1307	2.92986	2.799109	3.922171	5.308268	2.639057	301.9	72.8	56.7	4.2880
14	32	264	C	3	F	CF	C3	3F	CF3	484	6.154858	3.041661	3.115513	2.9645	2.838493	3.871618	5.356586	2.564949	303.6	79.0	52.0	4.3694
14	33	265	C	2	M	CM	C2	2M	CM2	431	6.040255	3.097837	2.891205	2.702367	2.728506	3.641264	5.273	2.397895	320.8	74.0	54.7	4.3041
14	33	266	C	2	M	CM	C2	2M	CM2	518	6.222576	3.236519	3.294354	3.119939	2.821379	3.960432	5.389072	2.639057	389.2	86.0	52.7	4.4547
14	34	267	R 3	2	F	3F	32	2F	3F2	506	6.196444	3.210037	3.100317	2.888425	2.761907	3.941776	5.389072	2.70805	336.4	80.5	38.6	4.3884
14	34	268	R 3	2	F	3F	32	2F	3F2	445	6.047372	3.094672	3.002708	2.879198	2.783776	3.777806	5.283204	3.091042	354.9	72.4	51.7	4.2826
14	35	269	C	1	M	CM	C1	1M	CM1	574	6.329721	3.482009	3.275445	3.19663	3.017004	4.018723	5.46806	2.564949	387.8	91.1	42.5	4.5125
14	35	270	C	1	M	CM	C1	1M	CM1	597	6.363028	3.366261	3.343392	3.218676	2.960623	4.19132	5.521461	2.833213	328.1	97.3	36.8	4.5780
14	36	271	R 3	1	F	3F	31	1F	3F1	507	6.192362	3.3562	3.049273	3.052821	2.776954	4.005513	5.347108	2.890372	350.7	79.6	40.6	4.3770
14	36	272	R 3	1	F	3F	31	1F	3F1	487	6.154858	3.15551	3.133318	2.993229	2.775709	3.840957	5.347108	2.772589	326.5	79.5	28.3	4.3760
14	37	273	R 7	3	M	7M	73	3M	7M3	433	6.052089	3.007908	2.904165	2.787477	2.702032	3.873698	5.273	2.079442	277.0	67.5	44.0	4.2120
14	37	274	R 7	3	M	7M	73	3M	7M3	377	5.916202	2.934389	2.822569	2.567638	2.430978	3.786913	5.135798	1.791759	315.6	59.8	34.9	4.0912
14	38	275	R 7	3	F	7F	73	3F	7F3	360	5.855072	2.854745	2.725235	2.794839	2.374906	3.463859	5.049856	2.397895	257.3	59.1	31.4	4.0795
14	38	276	R 7	3	F	7F	73	3F	7F3	468	6.118097	3.129826	2.995232	2.899772	2.698	3.908417	5.327876	2.639057	288.7	73.9	42.4	4.3030
14	39	277	R 3	3	M	3M	33	3M	3M3	476	6.146329	3.106379	3.032064	2.796671	2.883683	3.992312	5.407172	2.197225	285.2	74.3	36.2	4.3078
14	39	278	R 3	3	M	3M	33	3M	3M3	493	6.182085	3.282789	3.089678	2.949688	2.761275	3.88855	5.407172	2.197225	259.0	78.8	41.9	4.3675
14	40	279	C	1	F	CF	C1	1F	CF1	513	6.20859	3.301561	2.983913	2.929592	2.742774	3.914221	5.384495	2.772589	312.4	85.5	37.8	4.4484
14	40	280	C	1	F	CF	C1	1F	CF1	490	6.156979	3.189859	3.088311	2.955691	2.697326	3.75068	5.351858	2.890372	*	79.6	*	4.3773
14	41	281	R 7	4	M	7M	74	4M	7M4	433	6.052089	3.137449	2.873565	2.880321	2.760643	3.858622	5.273	2.079442	333.7	67.6	57.9	4.2141
14	41	282	R 7	4	M	7M	74	4M	7M4	390	5.945421	2.916689	2.903069	2.665838	2.738256	3.735047	5.170484	2.079442	328.8	62.0	40.1	4.1265
14	42	283	R 7	2	F	7F	72	2F	7F2	424	6.008813	3.128951	2.945491	2.803966	2.651127	3.881151	5.159055	2.833213	311.8	61.2	35.6	4.1135
14	42	284	R 7	2	F	7F	72	2F	7F2	495	6.173786	3.058942	3.07223	2.903891	2.97144	3.929077	5.389072	2.70805	277.9	77.2	32.1	4.3468
14	43	285	C	3	M	CM	C3	3M	CM3	546	6.267201	3.212858	3.292126	3.028199	2.926382	4.047952	5.476464	2.944439	312.1	84.4	33.1	4.4350
14	43	286	C	3	M	CM	C3	3M	CM3	486	6.156979	3.218676	3.133971	3.021156	2.771964	3.879293	5.327876	2.639057	321.5	63.2	40.8	4.1456
14	44	287	R 7	4	F	7F	74	4F	7F4	472	6.124683	3.306337	2.93066	2.989714	2.762538	3.838161	5.327876	2.70805	355.9	73.7	72.6	4.2994
14	44	288	R 7	4	F	7F	74	4F	7F4	452	6.089045	3.208219	2.937838	2.915064	2.751748	3.897315	5.32301	2.397895	330.2	69.9	53.8	4.2466
14	45	289	R 3	4	M	3M	34	4M	3M4	388	5.924256	3.023347	2.776332	2.733393	2.606387	3.688129	5.135798	2.639057	348.5	61.8	52.1	4.1232
14	45	290	R 3	4	M	3M	34	4M	3M4	309	5.710427	2.631889	2.71899	2.437553	2.311545	3.57683	5.003946	1.94591	313.1	48.4	44.8	3.8787
14	46	291	R 3	3	F	3F	33	3F	3F3	349	5.826	2.861629	2.749192	2.565334	2.470639	3.750445	4.997212	2.302585	376.2	54.5	36.8	3.9987
14	46	292	R 3	3	F	3F	33	3F	3F3	430	6.008813	3.154231	2.89176	2.831447	2.889816	3.73122	5.257495	3.135494	298.2	67.0	50.0	4.2044
14	47	293	C	4	M	CM	C4	4M	CM4	381	5.910797	2.668269	2.790551	2.665143	2.478218	3.889164	5.187386	2.484907	329.8	55.6	42.6	4.0185
14	47	294	C	4	M	CM	C4	4M	CM4	501	6.190315	3.274878	3.025776	2.963467	2.872434	3.900355	5.402677	2.564949	329.4	73.5	52.0	4.2972
14	48	295	R 3	2	F	3F	32	2F	3F2	453	6.122493	3.253277	3.031582	2.89453	2.900322	3.917408	5.298317	#NUM!	302.4	73.6	32.5	4.2988
14	48	296	R 3	2	F	3F	32	2F	3F2	425	6.028279	3.167372	2.942331	2.87554	2.880321	3.732178	5.187386	2.302585	365.7	68.8	41.4	4.2314
21	1	301	R 3	2	M	3M	32	2M	3M2	823	6.698268	3.79414	3.672369	3.486916	3.323596	4.506785	5.811141	2.484907	361.9	142.3	34.8	4.9577
21	1	302	R 3	2	M	3M	32	2M	3M2	953	6.844815	4.043051	3.879603	3.630985	3.181382	4.463261	5.950643	2.639057	311.6	167.2	36.5	5.1190
21	2	303	R 3	1	F	3F	31	1F	3F1	800	6.641182	3.602913	3.652734	3.517201	2.952825	4.442298	5.796058	3.526361	398.8	139.2	41.4	4.9362

21	2	304	R 3	1	F	3F	31	1F	3F1	1024	6.895683	3.931826	3.772876	3.697715	3.553632	4.663439	6.049733	3.583519	394.3	173.9	72.7	5.1582
21	3	305	R 7	2	M	7M	72	2M	7M2	1018	6.903747	4.060443	3.941582	3.811539	3.406848	4.439352	6.063785	3.091042	339.3	171.8	50.1	5.1462
21	3	306	R 7	2	M	7M	72	2M	7M2	940	6.839476	3.902579	3.85577	3.550623	3.469479	4.528829	5.993961	1.791759	328.5	157.3	44.5	5.0584
21	4	307	C	3	F	CF	C3	3F	CF3	919	6.791221	3.941582	3.669824	3.635083	3.487987	4.450853	5.948035	3.367296	285.3	153.0	54.6	5.0304
21	4	308	C	3	F	CF	C3	3F	CF3	957	6.830874	4.085976	3.681729	3.65584	3.285038	4.402564	5.945421	3.433987	248.6	161.5	45.5	5.0844
21	5	309	C	2	M	CM	C2	2M	CM2	1174	7.040536	4.077537	3.960813	3.715886	3.544143	4.744932	6.173786	3.465736	247.5	199.1	36.3	5.2939
21	5	310	C	2	M	CM	C2	2M	CM2	1077	6.930495	4.085976	3.871722	3.701796	3.438493	4.547965	6.102559	3.988984	324.4	182.6	37.0	5.2075
21	6	311	C	2	F	CF	C2	2F	CF2	1007	6.877296	3.960813	3.788272	3.691626	3.631515	4.603369	5.948035	3.610918	327.5	165.6	47.9	5.1096
21	6	312	C	2	F	CF	C2	2F	CF2	921	6.761573	3.865141	3.630721	3.62127	3.385745	4.406841	5.921578	4.043051	327.4	158.3	58.5	5.0644
21	7	313	R 7	1	M	7M	71	1M	7M1	855	6.673298	3.724126	3.686502	3.51898	3.216874	4.496694	5.913503	4.158883	359.0	144.3	42.5	4.9719
21	7	314	R 7	1	M	7M	71	1M	7M1	1026	6.906755	3.970292	3.906307	3.639689	3.427839	4.691348	6.079933	3.295837	338.9	168.1	41.0	5.1247
21	8	315	R 3	4	F	3F	34	4F	3F4	858	6.689599	3.931826	3.565864	3.526066	3.628599	4.175617	5.883322	3.988984	279.3	133.5	61.0	4.8940
21	8	316	R 3	4	F	3F	34	4F	3F4	729	6.55108	3.730141	3.619529	3.382184	3.282789	4.084631	5.717028	3.367296	250.9	119.3	53.3	4.7818
21	9	317	C	1	M	CM	C1	1M	CM1	758	6.628041	3.601277	3.449035	3.476923	3.013572	4.103635	5.70711	0.693147	297.8	139.5	27.7	4.9380
21	9	318	C	1	M	CM	C1	1M	CM1	1174	7.026427	4.197202	3.960813	3.854923	3.385068	4.644391	6.12905	3.871201	340.2	200.2	45.0	5.2995
21	10	319	R 7	1	F	7F	71	1F	7F1	976	6.84375	3.900355	3.779748	3.558913	3.350606	4.844187	5.942799	3.637586	374.3	167.5	47.8	5.1210
21	10	320	R 7	1	F	7F	71	1F	7F1	833	6.692084	3.80855	3.669187	3.573188	3.250762	4.339641	5.796058	3.295837	344.2	140.6	32.3	4.9460
21	11	321	R 3	1	M	3M	31	1M	3M1	1027	6.906755	3.979682	3.804215	3.530763	3.369363	4.519394	6.100319	3.332205	322.4	177.1	44.5	5.1765
21	11	322	R 3	1	M	3M	31	1M	3M1	987	6.901737	3.941582	3.951244	3.706842	3.522234	4.474036	6.073045	#NUM!	310.6	165.4	42.5	5.1082
21	12	323	C	4	F	CF	C4	4F	CF4	1038	6.861711	3.921973	3.813307	3.510799	3.615771	4.318288	6.052089	4.418841	249.5	162.1	54.4	5.0879
21	12	324	C	4	F	CF	C4	4F	CF4	935	6.740519	3.960813	3.638901	3.637718	3.366606	4.129712	5.940171	4.488636	200.8	145.3	41.2	4.9787
21	13	325	R 3	4	M	3M	34	4M	3M4	828	6.656727	3.81892	3.821989	3.522234	3.270709	4.198855	5.888878	3.912023	233.3	138.4	43.0	4.9303
21	13	326	R 3	4	M	3M	34	4M	3M4	818	6.688355	3.941582	3.569814	3.475222	3.196221	4.200355	5.891644	2.70805	280.0	130.4	53.0	4.8708
21	14	327	R 3	4	F	3F	34	4F	3F4	933	6.82546	3.998201	3.740166	3.595804	3.472277	4.480627	6.006353	2.484907	245.7	146.7	52.6	4.9885
21	14	328	R 3	4	F	3F	34	4F	3F4	854	6.733402	3.691875	3.708805	3.427839	3.40053	4.452136	5.921578	2.639057	332.4	136.0	58.3	4.9127
21	15	329	R 7	4	M	7M	74	4M	7M4	1086	6.967909	4.043051	3.800644	3.617518	3.668932	4.60517	6.118097	3.178054	297.6	171.8	52.7	5.1465
21	15	330	R 7	4	M	7M	74	4M	7M4	954	6.835185	3.887218	3.8582	3.54818	3.484312	4.282897	6.056784	3.178054	276.3	150.6	55.4	5.0145
21	16	331	R 7	1	F	7F	71	1F	7F1	990	6.851185	3.887115	3.815512	3.64558	3.412137	4.479834	6.052089	3.806662	549.4	162.0	87.9	5.0877
21	16	332	R 7	1	F	7F	71	1F	7F1	924	6.787845	4.025352	3.802543	3.637455	3.392157	4.470495	5.902633	3.610918	636.1	146.8	123.4	4.9888
21	17	333	R 3	2	M	3M	32	2M	3M2	1076	6.943122	3.960813	4.051785	3.734808	3.451574	4.541378	6.133398	3.688879	547.2	183.7	65.3	5.2131
21	17	334	R 3	2	M	3M	32	2M	3M2	844	6.72022	3.835034	3.754199	3.445055	3.121924	4.32823	5.855072	2.70805	702.4	143.6	89.1	4.9668
21	18	335	C	2	F	CF	C2	2F	CF2	1025	6.893656	4.034241	3.817383	3.632574	3.577389	4.474492	6.006353	3.663562	684.1	163.1	109.0	5.0947
21	18	336	C	2	F	CF	C2	2F	CF2	872	6.738152	3.887833	3.752089	3.543565	3.301377	4.412798	5.869297	3.332205	623.2	147.1	111.9	4.9908
21	19	337	C	4	M	CM	C4	4M	CM4	1023	6.890609	4.043051	3.758406	3.686752	3.674273	4.596836	6.084499	3.688879	597.4	165.5	104.2	5.1087
21	19	338	C	4	M	CM	C4	4M	CM4	968	6.855409	4.016383	3.836291	3.611863	3.584352	4.427956	6.052089	2.944439	620.3	145.1	125.3	4.9775
21	20	339	R 3	3	F	3F	33	3F	3F3	796	6.637258	3.730141	3.643359	3.419037	3.106826	4.389375	5.805135	3.496508	781.2	131.7	130.2	4.8808
21	20	340	R 3	3	F	3F	33	3F	3F3	919	6.791221	3.998201	3.689004	3.559482	3.496204	4.367547	5.981414	3.367296	703.3	148.0	143.6	4.9971
21	21	341	R 7	2	M	7M	72	2M	7M2	992	6.860664	4.102643	3.763871	3.71856	3.326474	4.501253	5.981414	3.637586	678.9	165.2	99.1	5.1075
21	21	342	R 7	2	M	7M	72	2M	7M2	1040	6.89467	4.060443	3.775172	3.717831	3.513931	4.718499	6.084499	3.970292	611.0	167.8	94.0	5.1226
21	22	343	R 7	3	F	7F	73	3F	7F3	897	6.767343	3.816833	3.651437	3.545009	3.408173	4.317088	5.897154	3.332205	562.7	145.8	103.3	4.9821
21	22	344	R 7	3	F	7F	73	3F	7F3	623	6.390241	3.459466	3.266141	3.372283	3.019937	4.237434	5.521461	3.295837	716.6	97.1	92.8	4.5757
21	23	345	R 3	3	M	3M	33	3M	3M3	920	6.799056	3.941582	3.702659	3.668294	3.291383	4.428672	5.976351	3.135494	577.0	145.1	90.3	4.9774
21	23	346	R 3	3	M	3M	33	3M	3M3	913	6.767343	3.960813	3.819579	3.528857	3.186353	4.445471	5.978886	3.78419	494.4	150.6	73.0	5.0145
21	24	347	R 7	4	F	7F	74	4F	7F4	830	6.697034	3.998201	3.649359	3.60916	3.104587	4.13148	5.855072	2.995732	493.5	133.2	100.0	4.8918
21	24	348	R 7	4	F	7F	74	4F	7F4	847	6.708084	3.81419	3.668422	3.476923	3.437529	4.306899	5.908083	3.332205	773.1	131.2	147.6	4.8765
21	25	349	R 7	1	M	7M	71	1M	7M1	1076	6.929517	4.025352	3.960813	3.673512	3.490733	4.644391	6.109248	3.988984	668.7	183.0	87.5	5.2095
21	25	350	R 7	1	M	7M	71	1M	7M1	1071	6.955593	4.197202	4.043051	3.869116	3.519573	4.454464	6.079933	3.091042	580.5	185.6	60.9	5.2238
21	26	351	C	1	F	CF	C1	1F	CF1	1002	6.826545	4.085976	3.781914	3.79975	3.263467	4.330996	6.042633	4.382027	712.0	165.1	77.4	5.1065
21	26	352	C	1	F	CF	C1	1F	CF1	852	6.70196	3.795377	3.649099	3.480471	3.291754	4.153871	5.843544	3.637586	678.9	148.1	86.2	4.9982
21	27	353	R 7	3	M	7M	73	3M	7M3	730	6.563856	3.722072	3.568687	3.342508	2.911263	4.300003	5.733341	3.044522	713.3	117.7	96.6	4.7678
21	27	354	R 7	3	M	7M	73	3M	7M3	993	6.871091	3.998201	3.85291	3.740879	3.478158	4.487062	6.030685	3.367296	637.2	163.8	84.8	5.0989
21	28	355	C	4	F	CF	C4	4F	CF4	779	6.616065	3.921973	3.607805	3.516607	3.347093	4.028383	5.777652	3.465736	555.5	117.8	91.7	4.7691
21	28	356	C	4	F	CF	C4	4F	CF4	881	6.740519	3.89508	3.680343	3.503453	3.666378	4.343805	5.924256	3.555348	532.0	136.4	113.5	4.9157
21	29	357	C	3	M	CM	C3	3M	CM3	1129	6.993015	4.069027	4.007333	3.73624	3.708192	4.582925	6.154858	3.688879	622.9	173.1	106.9	5.1537
21	29	358	C	3	M	CM	C3	3M	CM3	1162	7.011214	4.110874	4.016383	3.884857	3.67275	4.70048	6.159095	3.970292	577.6	186.6	87.9	5.2288
21	30	359	R 7	2	F	7F	72	2F	7F2	928	6.796824	3.979682	3.77689	3.672242	3.099642	4.513713	5.926926	3.496508	736.9	158.1	104.3	5.0631
21	30	360	R 7	2	F	7F	72	2F	7F2	839	6.692084	3.89569	3.645319	3.526802	3.542118	4.47221	5.826	3.496508	651.5	136.9	102.5	4.9191
21	31	361	R 3	1	M	3M	31	1M	3M1	946	6.826545	4.025352	3.846204	3.789403	3.271089	4.384149	5.976351	3.178054	696.5	164.2	66.5	5.1009

21	31	362	R 3	1	M	3M	31	1M	3M1	833	6.725034	3.912023	3.782711	3.681603	3.100543	4.322011	5.869297	#NUM!	645.0	137.0	77.7	4.9203
21	32	363	C	3	F	CF	C3	3F	CF3	955	6.828712	4.025352	3.784758	3.694862	3.419692	4.330207	5.945421	3.433987	711.5	153.8	127.9	5.0354
21	32	364	C	3	F	CF	C3	3F	CF3	724	6.555357	3.664074	3.557203	3.360896	3.187179	4.108412	5.659482	3.044522	565.2	123.3	93.0	4.8145
21	33	365	C	2	M	CM	C2	2M	CM2	1070	6.951772	4.077537	3.960813	3.676933	3.705982	4.463261	6.089045	3.218876	700.3	171.8	103.9	5.1465
21	33	366	C	2	M	CM	C2	2M	CM2	1024	6.898715	4.034241	3.751385	3.802766	3.394173	4.334673	6.059123	3.496508	592.3	167.2	81.4	5.1190
21	34	367	R 3	2	F	3F	32	2F	3F2	989	6.863803	4.174387	3.931826	3.681225	3.361763	4.465563	5.978886	3.465736	694.8	166.2	97.8	5.1130
21	34	368	R 3	2	F	3F	32	2F	3F2	809	6.647688	3.878466	3.537184	3.531787	3.138533	4.173002	5.802118	3.637586	649.8	140.3	96.8	4.9437
21	35	369	C	1	M	CM	C1	1M	CM1	1094	6.966024	4.119037	3.837515	3.863883	3.316728	4.26127	6.079933	3.526361	555.5	191.6	61.6	5.2556
21	35	370	C	1	M	CM	C1	1M	CM1	1043	6.942157	3.998201	4.016383	3.715643	3.276767	4.470266	6.049733	2.079442	642.2	183.2	68.8	5.2103
21	36	371	R 3	1	F	3F	31	1F	3F1	940	6.806829	3.883932	3.724247	3.601141	3.331133	4.744932	5.971262	3.583519	679.4	#VALUE! *		#VALUE!
21	36	372	R 3	1	F	3F	31	1F	3F1	928	6.80017	4.085976	3.762362	3.728461	3.362457	4.488636	5.913503	3.401197	710.8	158.5	96.2	5.0658
21	37	373	R 7	3	M	7M	73	3M	7M3	854	6.72022	3.828967	3.683867	3.599091	3.283914	4.397038	5.855072	3.218876	599.7	143.0	104.9	4.9625
21	37	374	R 7	3	M	7M	73	3M	7M3	848	6.706862	3.960813	3.679839	3.575571	3.185112	4.345622	5.863631	3.401197	427.3	131.2	68.2	4.8766
21	38	375	R 7	3	F	7F	73	3F	7F3	560	6.287859	3.375538	3.208825	3.150811	2.668616	3.765146	5.488938	3.091042	615.9	97.1	98.2	4.5757
21	38	376	R 7	3	F	7F	73	3F	7F3	766	6.609349	3.660609	3.563883	3.367813	3.220475	4.415582	5.755742	3.178054	612.5	#VALUE! *		#VALUE!
21	39	377	R 3	3	M	3M	33	3M	3M3	638	6.434547	3.654676	3.539799	3.242397	2.90963	3.926715	5.609472	2.70805	570.0	104.1	85.6	4.6454
21	39	378	R 3	3	M	3M	33	3M	3M3	715	6.549651	3.729061	3.462136	3.488445	3.199897	4.344584	5.676754	2.772589	583.3	117.7	73.0	4.7677
21	40	379	C	1	F	CF	C1	1F	CF1	953	6.782192	3.941582	3.722556	3.539509	3.254629	4.579647	5.934894	4.26268	735.6	162.1	94.6	5.0885
21	40	380	C	1	F	CF	C1	1F	CF1	942	6.807935	3.988984	3.71113	3.695979	3.218876	4.410857	5.958425	3.610918	720.5	152.0	99.4	5.0241
21	41	381	R 7	4	M	7M	74	4M	7M4	928	6.80017	3.887935	3.82875	3.549905	3.665611	4.583129	5.942799	3.401197	660.5	153.9	120.2	5.0362
21	41	382	R 7	4	M	7M	74	4M	7M4	789	6.621406	3.792225	3.659965	3.39081	3.097837	4.256605	5.874931	3.637586	575.0	121.1	101.9	4.7966
21	42	383	R 7	2	F	7F	72	2F	7F2	871	6.726233	4.007333	3.623274	3.647667	3.132882	4.402319	5.877736	3.610918	494.4	142.5	74.4	4.9596
21	42	384	R 7	2	F	7F	72	2F	7F2	681	6.483107	3.602504	3.368674	3.557916	3.092859	4.248209	5.613128	3.295837	690.1	115.6 *		4.7505
21	43	385	C	3	M	CM	C3	3M	CM3	955	6.82546	3.960813	3.73445	3.65842	3.30652	4.558393	5.924256	3.526361	518.9	161.5	90.9	5.0844
21	43	386	C	3	M	CM	C3	3M	CM3	936	6.809039	3.858622	3.826029	3.548323	3.135059	4.48931	5.958425	3.401197	611.9	150.4	76.0	5.0131
21	44	387	R 7	4	F	7F	74	4F	7F4	746	6.591674	3.694489	3.569955	3.384221	3.238286	4.232801	5.765191	2.833213	744.2	121.3	144.4	4.7984
21	44	388	R 7	4	F	7F	74	4F	7F4	774	6.625392	3.696103	3.521496	3.370394	3.165475	4.366151	5.814131	2.995732	764.0	122.9	145.2	4.8116
21	45	389	R 3	4	M	3M	34	4M	3M4	960	6.852243	4.016383	3.941582	3.577669	3.375196	4.390491	6.006353	2.639057	617.4	157.9	107.0	5.0620
21	45	390	R 3	4	M	3M	34	4M	3M4	724	6.565265	3.808993	3.543131	3.49575	3.056357	4.165735	5.749393	2.639057	566.1	119.2	86.2	4.7808
21	46	391	R 3	3	F	3F	33	3F	3F3	858	6.70196	3.821661	3.723764	3.599502	3.242592	4.379774	5.860786	3.78419	644.2	146.2	98.5	4.9847
21	46	392	R 3	3	F	3F	33	3F	3F3	843	6.700731	3.866084	3.683239	3.498324	3.184698	4.456786	5.849325	3.401197	561.4	144.4	91.7	4.9726
21	47	393	C	4	M	CM	C4	4M	CM4	1131	7.002156	4.174387	3.905602	3.911923	3.458522	4.593098	6.146329	3.465736	626.4	191.2	120.7	5.2533
21	47	394	C	4	M	CM	C4	4M	CM4	864	6.731018	3.776203	3.772876	3.456474	3.196221	4.521027	5.814131	3.258097	482.9	141.4	87.2	4.9513
21	48	395	R 3	2	F	3F	32	2F	3F2	786	6.635947	3.689004	3.693369	3.471501	3.102791	4.297557	5.793014	3.178054	743.2	134.8	85.6	4.9039
21	48	396	R 3	2	F	3F	32	2F	3F2	873	6.747587	3.960813	3.671225	3.627536	3.286161	4.413646	5.929589	3.044522	710.2	151.9	80.5	5.0229
28	1	401	R 3	2	M	3M	32	2M	3M2	1183	7.034388	4.102643	4.174387	3.998201	3.355153	4.220243	6.204558	3.871201	668.8	218.2	106.3	5.3854
28	1	402	R 3	2	M	3M	32	2M	3M2	1356	7.178545	4.363099	4.234107	3.86828	3.752793	4.836282	6.318968	3.806662	554.8	188.1	90.9	5.2372
28	2	403	R 3	1	F	3F	31	1F	3F1	1343	7.156177	4.248495	4.174387	3.951244	3.5874	4.875197	6.253829	4.110874	751.2	215.9	121.1	5.3748
28	2	404	R 3	1	F	3F	31	1F	3F1	1389	7.192182	4.343805	4.069027	3.941582	3.480625	4.812184	6.33328	4.094345	716.5	234.6	112.9	5.4578
28	3	405	R 7	2	M	7M	72	2M	7M2	1459	7.234898	4.388257	4.226834	4.102643	3.638112	4.60517	6.381816	4.276666	611.4	265.0	97.2	5.5798
28	3	406	R 7	2	M	7M	72	2M	7M2	1212	7.058758	4.135167	4.127134	3.866502	3.498324	4.912655	6.131226	3.89182	670.2	198.8	78.2	5.2921
28	4	407	C	3	F	CF	C3	3F	CF3	1402	7.202661	4.204693	4.051785	3.941582	3.822973	4.955827	6.368187	4.077537	558.9	215.5	126.5	5.3729
28	4	408	C	3	F	CF	C3	3F	CF3	1565	7.308543	4.406719	4.212128	3.931826	3.989725	4.770685	6.400257	4.276666	537.3	248.8	145.3	5.5165
28	5	409	C	2	M	CM	C2	2M	CM2	1311	7.134094	4.197202	4.226834	4.051785	3.671988	4.226542	6.25575	4.043051	376.3	245.4	55.5	5.5028
28	5	410	C	2	M	CM	C2	2M	CM2	1423	7.189168	4.356709	4.226834	4.135167	3.63019	4.804021	6.238325	4.584967	526.5	235.5	81.2	5.4619
28	6	411	C	2	F	CF	C2	2F	CF2	874	6.72263	3.858095	3.73134	3.564449	3.023347	4.16806	5.872118	3.7612	421.8	145.4	77.8	4.9793
28	6	412	C	2	F	CF	C2	2F	CF2	1562	7.315218	4.448516	4.290459	4.016383	3.875566	5.003946	6.395262	4.077537	472.1	250.8	94.5	5.5245
28	7	413	R 7	1	M	7M	71	1M	7M1	1353	7.181592	4.226834	4.255613	3.979682	3.676554	4.890349	6.269096	3.637586	677.1	222.2	87.1	5.4037
28	7	414	R 7	1	M	7M	71	1M	7M1	1578	7.31055	4.324133	4.324133	4.15104	3.666889	5.075174	6.40688	4.406719	641.0	272.6	85.0	5.6079
28	8	415	R 3	4	F	3F	34	4F	3F4	1206	7.04316	4.189655	4.025352	3.921973	3.56133	4.615121	6.196444	4.110874	610.3	186.4	135.2	5.2280
28	8	416	R 3	4	F	3F	34	4F	3F4	1448	7.233455	4.412798	4.234107	4.016383	3.808217	4.787492	6.380123	4.143135	508.4	222.2	128.4	5.4035
28	9	417	C	1	M	CM	C1	1M	CM1	1612	7.333023	4.375757	4.436752	4.069027	3.652734	4.983607	6.386879	4.406719	607.3	276.8	86.1	5.6233
28	9	418	C	1	M	CM	C1	1M	CM1	1287	7.109879	4.158883	4.069027	3.82177	3.528124	4.890349	6.120297	4.143135	466.3	212.8	78.7	5.3603
28	10	419	R 7	1	F	7F	71	1F	7F1	1210	7.047517	4.15104	4.043051	3.859677	3.449035	4.70953	6.148468	4.094345	651.7	200.1	109.8	5.2986
28	10	420	R 7	1	F	7F	71	1F	7F1	1269	7.097549	4.226834	4.085976	3.988984	3.460095	4.919981	6.2106	4.094345	653.2	207.6	90.5	5.3356
28	11	421	R 3	1	M	3M	31	1M	3M1	1438	7.237059	4.424847	4.189655	3.941582	3.566429	4.736198	6.415097	3.871201	497.0	237.5	91.6	5.4700
28	11	422	R 3	1	M	3M	31	1M	3M1	1591	7.333676	4.564348	4.382027	4.174387	3.520757	4.85203	6.473891	4.094345	534.9	255.2	91.2	5.5422
28	12	423	C	4	F	CF	C4	4F	CF4	1354	7.16858	4.324133	4.085976	3.941582	3.709907	4.624973	6.331502	4.025352	606.0	199.4	157.5	5.2952

28	12	424	C	4	F	CF	C4	4F	CF4	1391	7.183871	4.174387	4.324133	3.911323	3.700314	4.762174	6.272877	4.290459	450.5	277.7	139.4	5.6265
28	13	425	R 3	4	M	3M	34	4M	3M4	1248	7.099202	4.297285	4.077537	3.816723	3.626206	4.770685	6.23637	3.610918	554.6	212.0	109.1	5.3567
28	13	426	R 3	4	M	3M	34	4M	3M4	1153	7.014814	4.158883	4.119037	3.836761	3.465423	4.594109	6.20859	3.688879	572.1	165.1	117.9	5.1064
28	14	427	R 3	4	F	3F	34	4F	3F4	1427	7.224753	4.343805	4.337291	4.034241	3.834278	4.727388	6.357842	3.988984	737.1	212.3	180.9	5.3582
28	14	428	R 3	4	F	3F	34	4F	3F4	1444	7.233455	4.448516	4.127134	4.025352	3.888345	4.890349	6.363028	4.077537	554.0	206.6	143.4	5.3309
28	15	429	R 7	4	M	7M	74	4M	7M4	1094	6.917706	3.988984	4.034241	3.497568	3.480317	4.478473	6.163315	4.430817	511.0	168.3	104.5	5.1256
28	15	430	R 7	4	M	7M	74	4M	7M4	1371	7.189168	4.375757	4.102643	3.960813	3.752793	4.691348	6.371612	3.828641	548.9	206.8	163.2	5.3317
28	16	431	R 7	1	F	7F	71	1F	7F1	1370	7.160846	4.477337	4.197202	4.143135	3.836221	4.828314	6.495266	4.406719	751.1	223.8	174.5	5.4106
28	16	432	R 7	1	F	7F	71	1F	7F1	1323	7.133296	4.269697	4.174387	3.931826	3.757939	4.770685	6.240276	4.248495	904.3	217.5	185.5	5.3824
28	17	433	R 3	2	M	3M	32	2M	3M2	1268	7.180831	4.324133	4.283587	3.988984	3.582129	4.787492	6.306275	#NUM!	914.2	206.9	155.4	5.3323
28	17	434	R 3	2	M	3M	32	2M	3M2	1363	7.170888	4.356709	4.219508	4.025352	3.751854	4.762174	6.269096	4.127134	954.7	228.0	136.1	5.4293
28	18	435	C	2	F	CF	C2	2F	CF2	739	6.546785	3.689504	3.609972	3.494536	3.017983	3.688879	5.655992	3.73767	1070.8	127.8	101.7	4.8506
28	18	436	C	2	F	CF	C2	2F	CF2	1274	7.102499	4.158883	4.110874	3.904394	3.624074	4.322542	6.232448	4.077537	805.6	216.7	158.2	5.3786
28	19	437	C	4	M	CM	C4	4M	CM4	1562	7.312553	4.51086	4.343805	4.110874	3.752324	4.578826	6.476972	4.143135	891.8	241.2	231.9	5.4855
28	19	438	C	4	M	CM	C4	4M	CM4	1420	7.215975	4.350278	4.18205	4.085976	3.618725	4.615121	6.395262	4.077537	993.6	199.7	202.4	5.2967
28	20	439	R 3	3	F	3F	33	3F	3F3	1030	6.896694	4.060443	3.853864	3.820894	3.210037	4.511738	6.037871	3.713572	898.2	156.7	166.5	5.0545
28	20	440	R 3	3	F	3F	33	3F	3F3	1574	7.325149	4.590057	4.276666	4.174387	3.841601	4.859812	6.428105	4.025352	917.4	244.5	227.2	5.4991
28	21	441	R 7	2	M	7M	72	2M	7M2	1480	7.26333	4.424847	4.317488	4.15104	3.714304	4.934474	6.340359	3.970292	608.6	246.5	88.7	5.5074
28	21	442	R 7	2	M	7M	72	2M	7M2	1338	7.153834	4.343805	4.15104	4.034241	3.512142	4.691348	6.302619	4.077537	1059.8	206.1	194.0	5.3282
28	22	443	R 7	3	F	7F	73	3F	7F3	1383	7.190676	4.324133	4.304065	3.970292	3.62966	4.875197	6.270988	4.025352	918.0	231.6	146.8	5.4452
28	22	444	R 7	3	F	7F	73	3F	7F3	1541	7.296413	4.50535	4.330733	3.988984	3.974434	4.927254	6.376727	4.189655	1005.5	249.5	225.8	5.5196
28	23	445	R 3	3	M	3M	33	3M	3M3	1511	7.281386	4.317488	4.290459	3.901164	4.018183	5.049856	6.363028	4.060443	817.3	242.0	138.6	5.4890
28	23	446	R 3	3	M	3M	33	3M	3M3	1428	7.223296	4.310799	4.356709	3.979682	3.689629	4.787492	6.322565	4.043051	1000.3	236.9	156.4	5.4676
28	24	447	R 7	4	F	7F	74	4F	7F4	1276	7.119636	4.330733	4.043051	3.988984	3.71771	4.718499	6.25575	3.688879	1018.1	197.2	301.6	5.2842
28	24	448	R 7	4	F	7F	74	4F	7F4	1265	7.045777	4.337291	4.043051	3.979682	3.472277	4.585376	6.238325	4.762174	827.2	193.8	220.9	5.2666
28	25	449	R 7	1	M	7M	71	1M	7M1	1526	7.301148	4.436752	4.356709	4.283587	3.822536	4.820282	6.395262	3.78419	855.7	261.1	101.2	5.5649
28	25	450	R 7	1	M	7M	71	1M	7M1	1502	7.272398	4.276666	4.337291	4.127134	3.821223	4.934474	6.371612	4.127134	890.1	249.7	116.1	5.5203
28	26	451	C	1	F	CF	C1	1F	CF1	1407	7.196687	4.26268	4.234107	3.988984	3.490124	4.804021	6.313548	4.276666	991.9	235.7	160.9	5.4626
28	26	452	C	1	F	CF	C1	1F	CF1	1438	7.23201	4.324133	4.077537	3.979682	3.657647	5.003946	6.326149	4.007333	1130.6	237.9	139.9	5.4718
28	27	453	R 7	3	M	7M	73	3M	7M3	1401	7.198184	4.283587	4.15104	3.960813	3.749269	4.890349	6.306275	4.158883	933.4	213.0	162.8	5.3611
28	27	454	R 7	3	M	7M	73	3M	7M3	1543	7.297091	4.430817	4.369448	4.15104	3.853334	4.85203	6.383507	4.204693	954.5	247.7	152.6	5.5121
28	28	455	C	4	F	CF	C4	4F	CF4	1385	7.178545	4.363099	4.127134	3.931826	3.736717	4.691348	6.313548	4.304065	811.9	193.3	207.1	5.2640
28	28	456	C	4	F	CF	C4	4F	CF4	1519	7.280697	4.465908	4.248495	3.960813	3.845242	4.859812	6.398595	4.204693	712.2	266.9	211.2	5.5870
28	29	457	C	3	M	CM	C3	3M	CM3	1689	7.398786	4.574711	4.369448	4.18205	4.039536	4.867534	6.526495	4.007333	924.7	263.5	219.0	5.5739
28	29	458	C	3	M	CM	C3	3M	CM3	1596	7.339538	4.394449	4.363099	4.085976	3.74762	4.94876	6.45047	4.025352	911.0	257.8	224.7	5.5523
28	30	459	R 7	2	F	7F	72	2F	7F2	1291	7.110696	4.158883	4.158883	3.979682	3.399863	4.736198	6.259581	4.189655	739.2	207.7	135.8	5.3362
28	30	460	R 7	2	F	7F	72	2F	7F2	1330	7.138073	4.226834	4.119037	4.060443	3.507358	4.85203	6.272877	4.26268	898.3	221.7	181.9	5.4013
28	31	461	R 3	1	M	3M	31	1M	3M1	1632	7.358831	4.537961	4.350278	4.219508	3.873698	5.01728	6.466145	4.127134	954.9	260.7	125.0	5.5633
28	31	462	R 3	1	M	3M	31	1M	3M1	1561	7.30586	4.442651	4.337291	4.043051	3.759338	5.056246	6.383507	4.276666	933.7	259.1	119.5	5.5570
28	32	463	C	3	F	CF	C3	3F	CF3	1168	7.010312	4.197202	3.970292	3.809215	3.425565	4.586293	6.137727	4.094345	883.2	168.7	154.7	5.1279
28	32	464	C	3	F	CF	C3	3F	CF3	1510	7.268223	4.304065	4.094345	4.025352	3.838807	4.859812	6.383507	4.330733	916.9	236.1	170.3	5.4642
28	33	465	C	2	M	CM	C2	2M	CM2	1525	7.26333	4.460144	4.226834	4.025352	3.819908	4.718499	6.342121	4.584967	506.1	256.9	71.8	5.5489
28	33	466	C	2	M	CM	C2	2M	CM2	1658	7.358831	4.569543	4.424847	4.110874	3.738859	4.736198	6.455199	4.477337	842.6	274.1	159.5	5.6134
28	34	467	R 3	2	F	3F	32	2F	3F2	1430	7.227662	4.50535	4.135167	4.016383	3.573188	4.70048	6.350886	3.970292	976.6	228.8	232.3	5.4330
28	34	468	R 3	2	F	3F	32	2F	3F2	1380	7.181592	4.283587	4.051785	3.941582	3.638375	5.023881	6.289716	4.174387	952.0	250.0	186.6	5.5215
28	35	469	C	1	M	CM	C1	1M	CM1	1795	7.443664	4.516339	4.436752	4.135167	3.996548	5.081404	6.53814	4.454347	727.9	284.6	100.1	5.6510
28	35	470	C	1	M	CM	C1	1M	CM1	1508	7.271009	4.543295	4.283587	4.043051	3.874529	4.85203	6.34388	4.248495	1101.0	263.6	116.3	5.5746
28	36	471	R 3	1	F	3F	31	1F	3F1	1406	7.193686	4.424847	4.241327	3.837515	3.699819	4.770685	6.282267	4.317488	1024.3	226.3	149.1	5.4220
28	36	472	R 3	1	F	3F	31	1F	3F1	1425	7.216709	4.269697	4.248495	4.094345	3.614964	4.836282	6.347389	4.143135	882.9	239.1	127.2	5.4770
28	37	473	R 7	3	M	7M	73	3M	7M3	1621	7.342132	4.350278	4.166665	4.034241	3.668932	4.820282	6.242223	4.343805	954.7	236.4	129.4	5.4655
28	37	474	R 7	3	M	7M	73	3M	7M3	1343	7.134891	4.337291	4.248495	3.725211	3.573188	4.672829	6.259581	4.477337	1021.7	217.0	195.5	5.3798
28	38	475	R 7	3	F	7F	73	3F	7F3	1234	7.026427	4.248495	3.979682	3.762478	3.482777	4.456902	6.194405	4.682131	978.8	192.5	221.7	5.2603
28	38	476	R 7	3	F	7F	73	3F	7F3	1451	7.131699	4.219508	4.025352	4.176078	3.744551	4.727388	6.311735	5.298317	919.1	244.2	188.7	5.4981
28	39	477	R 3	3	M	3M	33	3M	3M3	1462	7.251345	4.382027	4.189655	4.085976	3.964995	4.804021	6.381816	3.951244	818.2	265.3	155.5	5.5807
28	39	478	R 3	3	M	3M	33	3M	3M3	1426	7.222566	4.430817	4.158883	4.034241	3.713084	4.812184	6.350886	4.025352	865.1	251.5	136.9	5.5274
28	40	479	C	1	F	CF	C1	1F	CF1	1576	7.31055	4.483003	4.276666	4.051785	3.756304	4.844187	6.385194	4.382027	1048.4	256.0	144.2	5.5451
28	40	480	C	1	F	CF	C1	1F	CF1	1346	7.151485	4.197202	4.135167	3.899242	3.606856	4.882802	6.244167	4.248495	1023.6	218.8	168.4	5.3881
28	41	481	R 7	4	M	7M	74	4M	7M4	1384	7.184629	4.412798	4.174387	3.970292	3.776203	4.770685	6.315358	4.174387	923.6	285.3	211.3	5.6535

28	41	482	R 7	4	M	7M	74	4M	7M4	1430	7.176255	4.442651	4.297285	3.970292	3.850998	4.762174	6.335054	4.804021	932.8	234.3	183.1	5.4566
28	42	483	R 7	2	F	7F	72	2F	7F2	1228	7.063048	4.189655	4.025352	3.931826	3.417071	4.770685	6.139885	4.094345	967.7	198.7	151.9	5.2919
28	42	484	R 7	2	F	7F	72	2F	7F2	1264	7.099202	4.189655	4.166665	3.859887	3.441059	4.762174	6.192362	3.970292	1058.7	195.4	180.5	5.2752
28	43	485	C	3	M	CM	C3	3M	CM3	1527	7.286192	4.350278	4.255613	3.988984	3.832114	5.01728	6.410175	4.204693	915.9	219.2	172.7	5.3901
28	43	486	C	3	M	CM	C3	3M	CM3	1528	7.270313	4.400603	4.197202	4.094345	3.719409	4.828314	6.444131	4.51086	968.7	245.5	248.6	5.5033
28	44	487	R 7	4	F	7F	74	4F	7F4	1309	7.120444	4.276666	3.979682	3.998201	3.57655	4.569439	6.293419	4.276666	1034.8	214.2	239.6	5.3667
28	44	488	R 7	4	F	7F	74	4F	7F4	1292	7.118016	4.356709	4.102643	3.970292	3.62966	4.875197	6.270988	4.060443	1037.0	207.5	250.1	5.3350
28	45	489	R 3	4	M	3M	34	4M	3M4	1327	7.153052	4.343805	4.234107	3.88732	3.683867	4.70048	6.329721	3.89182	851.8	207.0	183.7	5.3328
28	45	490	R 3	4	M	3M	34	4M	3M4	1448	7.237778	4.412798	4.15104	3.840527	3.866188	4.969813	6.357842	4.043051	874.3	246.9	193.2	5.5089
28	46	491	R 3	3	F	3F	33	3F	3F3	1514	7.284135	4.477337	4.297285	4.166665	3.894266	4.795791	6.352629	4.043051	1100.6	238.7	202.3	5.4752
28	46	492	R 3	3	F	3F	33	3F	3F3	1375	7.220374	4.241327	4.189655	3.979682	3.760968	4.770685	6.297109	2.079442	1083.2	208.1	167.5	5.3378
28	47	493	C	4	M	CM	C4	4M	CM4	1415	7.210818	4.356709	4.110874	4.034241	3.764682	4.812184	6.364751	4.110874	771.0	242.3	135.6	5.4900
28	47	494	C	4	M	CM	C4	4M	CM4	1507	7.272398	4.363099	4.337291	4.043051	3.745732	4.955827	6.368187	4.204693	1024.0	244.9	185.5	5.5009
28	48	495	R 3	2	F	3F	32	2F	3F2	1496	7.26403	4.304065	4.166665	4.043051	3.540959	4.70048	6.44572	4.219508	1059.7	227.6	175.1	5.4274
28	48	496	R 3	2	F	3F	32	2F	3F2	1387	7.188413	4.369448	4.197202	3.988984	3.557346	4.919981	6.280396	4.143135	1149.8	207.3	198.1	5.3340
35	1	501	R 3	2	M	3M	32	2M	3M2	1597	7.351158	4.483003	4.324133	4.166665	3.796163	4.594817	6.543912	3.663562	934.4	291.1	151.5	5.6738
35	1	502	R 3	2	M	3M	32	2M	3M2	2153	7.886081	4.762174	4.762174	4.400603	4.091173	4.962845	6.725034	#NUM!	903.5	381.4	146.2	5.9439
35	2	503	R 3	1	F	3F	31	1F	3F1	1947	7.528332	4.68675	4.521789	4.343805	3.92947	5.087596	6.570883	4.465908	1250.2	332.4	179.0	5.8065
35	2	504	R 3	1	F	3F	31	1F	3F1	1973	7.541152	4.714025	4.574711	4.375757	3.841815	4.867534	6.670766	4.488636	973.6	340.3	177.7	5.8297
35	3	505	R 7	2	M	7M	72	2M	7M2	2169	7.571474	4.731803	4.658711	4.350278	3.949319	5.209486	6.70196	5.42495	940.3	301.7	162.5	5.7094
35	3	506	R 7	2	M	7M	72	2M	7M2	2398	7.729296	4.820282	4.787492	4.448516	4.116106	5.214936	6.874198	4.820282	918.3	399.0	190.4	5.9888
35	4	507	C	3	F	CF	C3	3F	CF3	2089	7.58121	4.677491	4.564348	4.283587	4.279994	4.912655	6.6995	4.85203	1014.1	358.6	264.6	5.8823
35	4	508	C	3	F	CF	C3	3F	CF3	1897	7.461066	4.494239	4.424847	4.310799	3.912023	4.941642	6.49224	5.062595	846.4	319.2	174.4	5.7657
35	5	509	C	2	M	CM	C2	2M	CM2	2542	7.789455	4.923624	4.766438	4.488636	4.199155	5.342334	6.875232	4.844187	835.9	420.4	135.6	6.0413
35	5	510	C	2	M	CM	C2	2M	CM2	2512	7.780303	4.966335	4.795791	4.49981	4.028917	5.09375	6.834109	4.779123	978.8	433.9	152.5	6.0729
35	6	511	C	2	F	CF	C2	2F	CF2	2032	7.562681	4.812184	4.537961	4.276666	3.769076	4.787492	6.639876	4.672829	992.1	348.7	159.0	5.8543
35	6	512	C	2	F	CF	C2	2F	CF2	1864	7.465655	4.70953	4.297285	4.043051	3.788725	4.682131	6.663133	4.762174	948.9	322.5	144.0	5.7761
35	7	513	R 7	1	M	7M	71	1M	7M1	2208	7.6587	4.820282	4.634729	4.310799	4.055604	5.068904	6.834109	4.488636	1090.0	356.6	142.5	5.8767
35	7	514	R 7	1	M	7M	71	1M	7M1	2060	7.5807	4.848116	4.600158	4.350278	3.878466	4.927254	6.71174	4.60517	890.0	363.1	154.2	5.8948
35	8	515	R 3	4	F	3F	34	4F	3F4	1637	7.339538	4.465908	4.350278	4.060443	3.772071	4.75359	6.463029	4.574711	865.1	269.8	210.4	5.5975
35	8	516	R 3	4	F	3F	34	4F	3F4	1782	7.422374	4.65396	4.337291	4.102643	3.901366	4.795791	6.59987	4.691348	893.2	254.8	254.6	5.5406
35	9	517	C	1	M	CM	C1	1M	CM1	1971	7.52564	4.70048	4.677491	4.269697	3.8828	5.123964	6.539586	4.75359	827.4	354.0	112.9	5.8692
35	9	518	C	1	M	CM	C1	1M	CM1	2085	7.603898	4.836282	4.59512	4.330733	3.868698	5.257495	6.660575	4.369448	878.2	#VALUE! *		#VALUE!
35	10	519	R 7	1	F	7F	71	1F	7F1	1732	7.383368	4.49981	4.356709	4.135167	3.822536	5.068904	6.527958	4.812184	1001.5	288.9	191.3	5.6662
35	10	520	R 7	1	F	7F	71	1F	7F1			4.553877	4.460144	4.189655	3.583241	4.718499	6.493754	#VALUE!	1023.3	0.0	179.6	#NUM!
35	11	521	R 3	1	M	3M	31	1M	3M1	2104	7.609367	4.75359	4.731803	4.394449	3.737431	5.062595	6.733402	4.465908	883.3	353.2	123.5	5.8671
35	11	522	R 3	1	M	3M	31	1M	3M1	2254	7.686162	4.85203	4.779123	4.454347	3.855029	5.081404	6.775366	4.330733	856.7	359.1	149.8	5.8835
35	12	523	C	4	F	CF	C4	4F	CF4	1750	7.422374	4.624973	4.532599	4.204693	3.669187	4.615121	6.546785	4.343805	793.6	288.2	220.3	5.6638
35	12	524	C	4	F	CF	C4	4F	CF4	1234	7.069874	4.276666	3.988984	3.951244	3.316365	4.154028	6.293419	4.060443	855.6	200.6	280.0	5.3011
35	13	525	R 3	4	M	3M	34	4M	3M4	1638	7.364547	4.600158	4.369448	4.051785	3.595393	4.795791	6.577861	4.077537	987.6	231.6	229.6	5.4451
35	13	526	R 3	4	M	3M	34	4M	3M4	2309	7.680637	4.867534	4.740575	4.356709	3.912423	5.236442	6.837333	4.962845	836.4	378.2	253.8	5.9354
35	14	527	R 3	4	F	3F	34	4F	3F4	1576	7.313887	4.537961	4.310799	4.077537	3.772071	4.736198	6.481577	4.317488	859.2	256.1	220.2	5.5455
35	14	528	R 3	4	F	3F	34	4F	3F4	1685	7.376508	4.744932	4.406719	4.290459	3.429137	4.464298	6.496775	4.465908	971.9	273.4	234.0	5.6111
35	15	529	R 7	4	M	7M	74	4M	7M4	1633	#NUM!	4.714025	4.436752	4.127134	3.530763	4.770685	6.489205	#VALUE!	964.8	253.5	210.6	5.5354
35	15	530	R 7	4	M	7M	74	4M	7M4	2007	#NUM!	4.844187	4.672829	4.343805	3.815071	4.955827	6.723832	#VALUE!	897.4	294.6	215.8	5.6855
35	16	531	R 7	1	F	7F	71	1F	7F1	1730	7.40367	4.527209	4.448516	4.18205	3.579901	5.087596	6.463029	4.477337	1074.9	257.8	206.4	5.5520
35	16	532	R 7	1	F	7F	71	1F	7F1	1961	7.541152	4.691348	4.60517	4.269697	3.804215	5.303305	6.635947	4.343805	1337.5	#VALUE! *		#VALUE!
35	17	533	R 3	2	M	3M	32	2M	3M2	2105	7.601902	4.70953	4.677491	4.343805	3.980429	5.030438	6.682109	4.634729	1288.5	367.3	234.3	5.9061
35	17	534	R 3	2	M	3M	32	2M	3M2	2251	7.681099	4.890349	4.727388	4.394449	3.84631	5.030438	6.881411	4.430817	1237.0	385.5	265.4	5.9546
35	18	535	C	2	F	CF	C2	2F	CF2	1877	7.488294	4.668145	4.460144	4.330733	3.83773	4.736198	6.552508	4.49981	1360.8	313.9	302.3	5.7491
35	18	536	C	2	F	CF	C2	2F	CF2	1922	7.510978	4.770685	4.363099	3.988984	4.111693	4.927254	6.612041	4.543295	1466.9	340.7	342.7	5.8309
35	19	537	C	4	M	CM	C4	4M	CM4	2032	7.583756	4.731803	4.543295	4.465908	4.216857	4.595524	6.81564	4.189655	1229.5	334.8	417.3	5.8137
35	19	538	C	4	M	CM	C4	4M	CM4	1580	7.32449	4.477337	4.337291	4.241327	3.466048	4.51086	6.558198	4.143135	1200.6	242.2	296.3	5.4898
35	20	539	R 3	3	F	3F	33	3F	3F3	1684	7.404888	4.543295	4.516339	4.166665	3.691376	4.934474	6.489205	3.688879	1700.6	233.2	397.8	5.4520
35	20	540	R 3	3	F	3F	33	3F	3F3	1919	7.525101	4.722953	4.49981	4.248495	3.791887	4.727388	6.728629	4.174387	1587.1	312.3	378.7	5.7439
35	21	541	R 7	2	M	7M	72	2M	7M2	2300	7.717351	4.820282	4.762174	4.516339	4.041471	5.407172	6.753438	3.970292	1444.1	388.1	171.7	5.9613
35	21	542	R 7	2	M	7M	72	2M	7M2	2098	7.615298	4.70953	4.722953	4.276666	3.926912	5.327876	6.705639	4.234107	1263.5	342.4	212.7	5.8359
35	22	543	R 7	3	F	7F	73	3F	7F3	1725	7.410347	4.600158	4.388257	4.234107	3.714304	5.09375	6.520621	4.276666	1442.3	287.3	291.4	5.6606

35	22	544	R 7	3	F	7F	73	3F	7F3	1466	7.245655	4.343805	4.269697	4.226834	3.648838	4.70048	6.340359	4.158883	1323.6	264.8	224.0	5.5788
35	23	545	R 3	3	M	3M	33	3M	3M3	2221	7.675546	4.969813	4.68675	4.400603	4.073291	5.313206	6.759255	4.189655	1051.8	410.8	217.0	6.0180
35	23	546	R 3	3	M	3M	33	3M	3M3	1992	7.56008	4.820282	4.610158	4.465908	3.776661	4.812184	6.674561	4.276666	1215.2	328.2	195.7	5.7937
35	24	547	R 7	4	F	7F	74	4F	7F4	1435	7.17549	4.375757	4.18205	4.043051	3.81419	4.75359	6.36647	4.85203	1224.6	222.9	309.9	5.4067
35	24	548	R 7	4	F	7F	74	4F	7F4	1625	7.320527	4.553877	4.276666	3.931826	3.603322	4.890349	6.44572	4.736198	1292.6	266.1	303.4	5.5838
35	25	549	R 7	1	M	7M	71	1M	7M1	1789	7.438384	4.620059	4.465908	4.269697	3.634159	4.836282	6.661855	4.488636	1146.4	312.2	244.2	5.7437
35	25	550	R 7	1	M	7M	71	1M	7M1	2018	7.518064	4.65396	4.624973	4.290459	3.960813	4.260283	6.690842	5.17615 *		364.5 *		5.8987
35	26	551	C	1	F	CF	C1	1F	CF1	1693	7.36518	4.436752	4.324133	4.077537	3.640214	5.081404	6.44254	4.727388	1361.5	296.2	223.8	5.6909
35	26	552	C	1	F	CF	C1	1F	CF1	1705	7.389564	4.406719	4.412798	4.060443	3.638638	4.820282	6.385194	4.454347	1549.6	302.6	189.9	5.7123
35	27	553	R 7	3	M	7M	73	3M	7M3	1782	7.437795	4.731803	4.400603	4.18205	3.968592	4.859812	6.651572	4.418841	1116.7	286.4	252.9	5.6573
35	27	554	R 7	3	M	7M	73	3M	7M3	1946	7.520235	4.629863	4.59512	4.310799	4.065431	4.927254	6.630683	4.615121	778.8	336.6	149.1	5.8189
35	28	555	C	4	F	CF	C4	4F	CF4	1508	7.279319	4.516339	4.363099	4.119037	3.517795	4.537212	6.444131	4.060443	998.9	234.6	321.8	5.4580
35	28	556	C	4	F	CF	C4	4F	CF4	1727	7.41758	4.537961	4.51086	4.241327	3.708682	4.727388	6.533789	4.127134	1375.7	276.2	396.3	5.6212
35	29	557	C	3	M	CM	C3	3M	CM3	1872	7.506592	4.68675	4.590057	4.204693	4.035125	4.828314	6.622736	3.951244	1030.4	311.4	196.8	5.7411
35	29	558	C	3	M	CM	C3	3M	CM3	2195	7.661056	4.812184	4.418841	4.369448	3.782825	4.905275	6.882437	4.26268	1008.8	371.7	279.2	5.9181
35	30	559	R 7	2	F	7F	72	2F	7F2	1880	7.497762	4.59512	4.394449	4.15104	3.966511	5.09375	6.60123	4.330733	977.7	333.8	286.5	5.8106
35	30	560	R 7	2	F	7F	72	2F	7F2	1756	7.426549	4.5486	4.494239	4.18205	3.797061	5.062595	6.493754	4.330733	1296.1	283.7	288.8	5.6478
35	31	561	R 3	1	M	3M	31	1M	3M1	1878	7.484369	4.59512	4.579852	4.297285	4.086816	4.588939	6.633318	4.584967	1093.7	334.0	203.2	5.8110
35	31	562	R 3	1	M	3M	31	1M	3M1	2031	7.577634	4.812184	4.677491	4.418841	3.953165	5.187386	6.652863	4.343805	1343.6	346.4	180.9	5.8476
35	32	563	C	3	F	CF	C3	3F	CF3	1109	6.959399	4.110874	4.069027	3.841386	3.301009	3.981736	6.126869	4.025352	1359.8	186.3	311.9	5.2276
35	32	564	C	3	F	CF	C3	3F	CF3	898	6.753438	3.89233	3.768499	3.652734	2.875258	4.055084	5.916202	3.713572	1454.1	146.4	326.4	4.9864
35	33	565	C	2	M	CM	C2	2M	CM2	1392	7.204893	4.363099	4.269697	4.043051	3.511247	3.94739	6.35437	3.828641	1121.9	262.6	267.4	5.5707
35	33	566	C	2	M	CM	C2	2M	CM2	1800	7.461066	4.663439	4.49981	4.310799	4.212868	4.228001	6.680855	4.110874	1152.5	338.4	280.8	5.8241
35	34	567	R 3	2	F	3F	32	2F	3F2	1853	7.47817	4.644391	4.553877	4.269697	4.05595	5.043425	6.590301	4.430817	1275.4	294.0	352.6	5.6834
35	34	568	R 3	2	F	3F	32	2F	3F2	1634	7.350516	4.460144	4.406719	4.102643	3.753496	4.867534	6.4708	4.343805	986.4	268.4	243.1	5.5924
35	35	569	C	1	M	CM	C1	1M	CM1	1625	7.355002	4.49981	4.406719	4.212128	3.706719	4.70953	6.388561	4.110874	1162.5	289.8	163.0	5.6691
35	35	570	C	1	M	CM	C1	1M	CM1	1341	7.163947	4.304065	4.15104	4.085976	3.722072	4.185555	6.35437	3.89182	1284.8	232.8	208.7	5.4501
35	36	571	R 3	1	F	3F	31	1F	3F1	1770	7.239933	4.569543	4.516339	4.255613	3.819908	4.919981	6.52503	5.929589	1539.6	302.3	249.5	5.7114
35	36	572	R 3	1	F	3F	31	1F	3F1	1687	7.38709	4.553877	4.400603	4.234107	3.755837	4.912655	6.467699	4.276666	1434.4	290.5	194.6	5.6714
35	37	573	R 7	3	M	7M	73	3M	7M3	1908	7.523481	4.75359	4.60517	4.330733	3.996364	4.89784	6.60665	4.043051	1120.6	310.9	219.1	5.7393
35	37	574	R 7	3	M	7M	73	3M	7M3	1761	7.397562	4.677491	4.471639	4.276666	3.963286	4.836282	6.569481	4.859812	955.7	380.5	192.4	5.9414
35	38	575	R 7	3	F	7F	73	3F	7F3	1542	7.293018	4.406719	4.269697	4.18205	3.871201	4.812184	6.448889	4.276666	1440.1	264.0	274.5	5.5760
35	38	576	R 7	3	F	7F	73	3F	7F3	1469	7.215975	4.375757	4.189655	4.102643	3.699325	4.691348	6.364751	4.682131	1291.6	248.5	237.8	5.5154
35	39	577	R 3	3	M	3M	33	3M	3M3	1837	7.493874	4.75359	4.564348	4.234107	3.866607	4.867534	6.708084	3.688879	909.6	307.7	190.1	5.7292
35	39	578	R 3	3	M	3M	33	3M	3M3	2145	7.627544	4.890349	4.644391	4.50535	4.077029	4.990433	6.833032	4.51086	1033.0	355.2	232.9	5.8727
35	40	579	C	1	F	CF	C1	1F	CF1	1280	7.115582	4.350278	4.158883	4.007333	3.625673	4.160756	6.228511	3.89182	1175.8	242.6	161.5	5.4912
35	40	580	C	1	F	CF	C1	1F	CF1	1675	7.373374	4.553877	4.369448	4.174387	3.99305	5.01728	6.440947	4.406719	1293.6	279.5	237.0	5.6330
35	41	581	R 7	4	M	7M	74	4M	7M4	1765	7.114769	4.5486	4.494239	4.234107	3.979869	4.828314	6.639876	6.282267	1077.9	272.2	279.2	5.6065
35	41	582	R 7	4	M	7M	74	4M	7M4	1601	7.30586	4.564348	4.369448	4.143135	3.758639	4.762174	6.49224	4.718499	1096.9	245.5	257.8	5.5035
35	42	583	R 7	2	F	7F	72	2F	7F2	1709	7.165493	4.51086	4.424847	4.158883	3.689129	5.099866	6.483107	6.028279	1237.4	246.2	212.0	5.5062
35	42	584	R 7	2	F	7F	72	2F	7F2	1733	7.399398	4.620059	4.363099	4.204693	4.075841	5.09375	6.461468	4.584967	1279.9	283.2	266.7	5.6462
35	43	585	C	3	M	CM	C3	3M	CM3	2047	7.578145	4.672829	4.569543	4.330733	4.061994	4.787492	6.736967	4.521789	949.5	340.7	202.7	5.8310
35	43	586	C	3	M	CM	C3	3M	CM3	2060	7.586804	4.787492	4.590057	4.424847	3.90076	4.795791	6.770789	4.477337	1090.6	374.7	209.6	5.9262
35	44	587	R 7	4	F	7F	74	4F	7F4	1660	7.362011	4.672829	4.324133	4.127134	3.715521	4.718499	6.556778	4.442651	1123.0	276.7	308.8	5.6231
35	44	588	R 7	4	F	7F	74	4F	7F4	1260	7.048386	4.276666	4.025352	3.877639	4.074652	4.442887	6.246107	4.691348	1394.8	200.0	339.1	5.2984
35	45	589	R 3	4	M	3M	34	4M	3M4	1576	7.328437	4.537961	4.119037	4.330733	3.816173	4.804021	6.487684	3.970292	1200.1	243.3	295.1	5.4944
35	45	590	R 3	4	M	3M	34	4M	3M4	1359	7.190676	4.483003	4.324133	4.060443	3.897721	4.481759	6.335054	3.465736	1161.6	220.3	237.3	5.3951
35	46	591	R 3	3	F	3F	33	3F	3F3	1698	7.38709	4.634729	4.369448	4.324133	3.792789	4.672829	6.493754	4.418841	1202.3	276.0	256.9	5.6203
35	46	592	R 3	3	F	3F	33	3F	3F3	1881	7.374629	4.644391	4.465908	4.337291	3.828641	4.997212	6.575076	5.655992	1329.9	314.1	280.0	5.7498
35	47	593	C	4	M	CM	C4	4M	CM4	2263	7.396335	4.875197	4.629863	4.483003	4.050393	5.198497	6.809039	6.45047	708.2	#VALUE!	167.0	#VALUE!
35	47	594	C	4	M	CM	C4	4M	CM4	2237	7.391415	4.832306	4.615121	4.412798	3.955274	4.941642	6.766192	6.421622	576.1	#VALUE! *		#VALUE!
35	48	595	R 3	2	F	3F	32	2F	3F2	1651	7.07327	4.564348	4.343805	4.197202	3.985088	5.209486	6.472346	6.154858	975.5	272.0	140.7	5.6058
35	48	596	R 3	2	F	3F	32	2F	3F2	1758	7.153834	4.620059	4.454347	4.248495	4.120337	5.081404	6.472346	6.171701	1238.4	297.7	197.9	5.6961
42	1	601	R 3	2	M	3M	32	2M	3M2	2543	7.811568	4.987025	4.844187	4.579852	3.903789	5.303305	6.951772	4.304065	1217.2	412.1	221.6	6.0214
42	1	602	R 3	2	M	3M	32	2M	3M2	2823	7.917901	5.081404	5.036953	4.714025	4.197202	5.209486	7.01661	4.343805	1045.6	502.5	208.6	6.2196
42	2	603	R 3	1	F	3F	31	1F	3F1	2518	7.792349	4.980176	4.855929	4.430817	4.13868	5.493061	6.814543	4.564348	1079.3	394.3	212.5	5.9771
42	2	604	R 3	1	F	3F	31	1F	3F1	1618	7.391415	4.543295	4.430817	4.234107	4.163871	4.592085	6.499787	#NUM!	879.0	275.2	164.7	5.6174
42	3	605	R 7	2	M	7M	72	2M	7M2	2762	7.887209	4.990433	4.980176	4.644391	4.015301	5.517453	6.990257	4.59512	1199.4	469.0	327.4	6.1506

42	3	606	R 7	2	M	7M	72	2M	7M2	2857	7.92081	5.102911	4.916325	4.70048	4.47711	5.594711	6.936343	4.634729	1148.7	493.1	172.0	6.2007
42	4	607	C	3	F	CF	C3	3F	CF3	2312	7.710653	4.75359	4.516339	4.388257	4.010963	5.030438	6.70196	4.382027	1197.3	390.5	309.1	5.9675
42	4	608	C	3	F	CF	C3	3F	CF3	2427	7.751475	4.89784	4.584967	4.204693	4.114637	5.099866	6.936343	4.624973	1108.0	383.0	285.5	5.9479
42	5	609	C	2	M	CM	C2	2M	CM2	2567	7.810758	4.836282	4.70048	4.610158	4.196751	5.010635	6.971669	4.60517	891.6	484.6	283.0	6.1832
42	5	610	C	2	M	CM	C2	2M	CM2	2013	7.561122	4.620059	4.477337	4.226834	4.149622	4.927254	6.792344	4.51086	951.0	319.1	193.1	5.7654
42	6	611	C	2	F	CF	C2	2F	CF2	2714	7.868254	5.075174	4.855929	4.494239	4.323735	5.141664	6.988413	4.615121	1126.1	440.5	319.4	6.0880
42	6	612	C	2	F	CF	C2	2F	CF2	2529	7.779885	4.990433	4.714025	4.442651	3.975561	5.105945	6.900731	4.919981	1295.0	436.9	341.9	6.0797
42	7	613	R 7	1	M	7M	71	1M	7M1	2697	7.858641	4.97328	4.901564	4.590057	4.226104	5.4161	6.966967	4.691348	848.8	444.7	144.1	6.0974
42	7	614	R 7	1	M	7M	71	1M	7M1	2777	7.886081	5.161925	4.905275	4.820282	4.244344	5.379897	6.969791	4.762174	1112.2	460.5	200.3	6.1324
42	8	615	R 3	4	F	3F	34	4F	3F4	2502	7.778211	4.987025	4.740575	4.471639	4.306495	5.273	6.916715	4.736198	1052.5	403.9	341.3	6.0012
42	8	616	R 3	4	F	3F	34	4F	3F4	1938	7.529943	4.766438	4.516339	4.388257	4.010963	5.030438	6.70196	4.317488	986.5	301.0	250.3	5.7071
42	9	617	C	1	M	CM	C1	1M	CM1	2639	7.842279	5.065755	4.736198	4.727388	4.006606	5.170484	6.915723	4.532599	1137.3	450.3	187.5	6.1098
42	9	618	C	1	M	CM	C1	1M	CM1	1843	7.482682	4.610158	4.448516	4.343805	4.271654	4.106602	6.632002	4.189655	1073.2	357.9	214.5	5.8803
42	10	619	R 7	1	F	7F	71	1F	7F1	1897	7.498316	4.569543	4.543295	4.276666	3.790759	5.081404	6.594413	4.521789	1347.1	340.1	189.6	5.8294
42	10	620	R 7	1	F	7F	71	1F	7F1	2168	7.626083	4.816241	4.672829	4.363099	3.990095	5.347108	6.663133	4.762174	1288.7	366.5	298.8	5.9041
42	11	621	R 3	1	M	3M	31	1M	3M1	2421	7.744137	4.94876	4.718499	4.483003	4.128585	5.283204	6.913737	4.727388	1078.3	410.8	207.0	6.0181
42	11	622	R 3	1	M	3M	31	1M	3M1	2385	7.748891	4.890349	4.714025	4.600158	3.875359	5.493061	6.862758	4.189655	821.3	432.7	138.3	6.0700
42	12	623	C	4	F	CF	C4	4F	CF4	1927	7.515345	4.705016	4.50535	4.304065	3.768153	4.744932	6.617403	4.51086	945.4	304.0	280.1	5.7171
42	12	624	C	4	F	CF	C4	4F	CF4	2153	7.631917	4.848116	4.553877	4.406719	3.826465	5.192957	6.767343	4.49981	830.8	334.3	241.6	5.8121
42	13	625	R 3	4	M	3M	34	4M	3M4	1814	7.446585	4.766438	4.50535	4.317488	4.018723	4.634729	6.633318	4.60517	1094.5	198.8	260.8	5.2925
42	13	626	R 3	4	M	3M	34	4M	3M4	2214	7.656337	4.867534	4.731803	4.394449	4.128263	5.075174	6.759255	4.60517	1143.0	350.5	377.0	5.8594
42	14	627	R 3	4	F	3F	34	4F	3F4	2102	7.600402	4.879007	4.740575	4.310799	4.015301	5.075174	6.710523	4.634729	1433.8	323.5	362.0	5.7793
42	14	628	R 3	4	F	3F	34	4F	3F4	2117	7.604396	4.828314	4.569543	4.337291	3.899545	5.153292	6.760415	4.70048	1414.0	323.6	348.5	5.7795
42	15	629	R 7	4	M	7M	74	4M	7M4	2155	7.632886	4.882802	4.668145	4.442651	3.947197	5.030438	6.804615	4.49981	1038.9	316.1	269.3	5.7559
42	15	630	R 7	4	M	7M	74	4M	7M4	2221	7.657283	4.844187	4.722953	4.527209	4.062338	5.062595	6.853299	4.65396	1082.0	333.0	255.0	5.8081
42	16	631	R 7	1	F	7F	71	1F	7F1	2225	7.687539	4.828314	4.70048	4.610158	3.81903	4.905275	6.841615	3.78419	1595.1	353.5	335.2	5.8678
42	16	632	R 7	1	F	7F	71	1F	7F1	1234	7.07327	4.226834	4.304065	4.102643	3.462919	3.953357	6.200509	3.988984	1856.1	197.3	255.7	5.2847
42	17	633	R 3	2	M	3M	32	2M	3M2	2751	7.883446	5.123964	4.905275	4.65396	4.2142	5.398163	6.966024	4.584967	1578.0	587.6	309.7	6.3761
42	17	634	R 3	2	M	3M	32	2M	3M2	2777	7.893945	5.084505	4.919981	4.668145	4.255329	5.556828	6.98379	4.564348	1070.5	437.1	192.3	6.0801
42	18	635	C	2	F	CF	C2	2F	CF2	2234	7.6587	4.886583	4.812184	4.350278	4.017464	4.912655	6.731018	4.744932	1816.6	363.9	337.7	5.8968
42	18	636	C	2	F	CF	C2	2F	CF2	1846	7.467371	4.60517	4.49981	4.477337	3.502851	4.218478	6.683361	4.564348	1777.9	361.3	453.1	5.8897
42	19	637	C	4	M	CM	C4	4M	CM4	1851	7.467371	4.668145	4.521789	4.317488	3.661508	4.736198	6.677083	4.615121	1439.2	312.8	320.9	5.7457
42	19	638	C	4	M	CM	C4	4M	CM4	1929	7.520235	4.938065	4.639572	4.382027	3.820785	4.309859	6.728629	4.430817	1510.8	* *	*	
42	20	639	R 3	3	F	3F	33	3F	3F3	2454	7.757906	4.9523	4.70048	4.527209	4.00442	5.117994	6.905753	4.736198	1562.3	*	457.2 *	
42	20	640	R 3	3	F	3F	33	3F	3F3	2105	7.607381	4.905275	4.629863	4.483003	3.975561	4.934474	6.755769	4.521789	1267.4	305.2	312.0	5.7209
42	21	641	R 7	2	M	7M	72	2M	7M2	3000	7.956827	5.023881	5.003946	4.564348	4.49368	5.31812	7.100027	4.976734	1740.5	463.1	406.8	6.1379
42	21	642	R 7	2	M	7M	72	2M	7M2	2766	7.890208	5.036953	5.010635	4.569543	4.336768	5.451038	6.993933	4.553877	1743.0	390.3	240.4	5.9669
42	22	643	R 7	3	F	7F	73	3F	7F3	2403	7.747597	5.007296	4.672829	4.574711	4.316955	5.298317	6.821107	4.465908	1661.9	506.5	431.2	6.2275
42	22	644	R 7	3	F	7F	73	3F	7F3	2338	7.712891	4.916325	4.766438	4.460144	4.086144	5.105945	6.783325	4.615121	1722.0	369.8	429.6	5.9130
42	23	645	R 3	3	M	3M	33	3M	3M3	3066	7.98344	5.190175	5.01728	4.736198	4.356196	5.488938	7.088409	4.89784	1645.8	456.9	341.3	6.1245
42	23	646	R 3	3	M	3M	33	3M	3M3	3040	7.983781	5.114995	5.003946	4.644391	4.279302	5.420535	7.192934	4.672829	1209.5	527.4	257.6	6.2679
42	24	647	R 7	4	F	7F	74	4F	7F4	2342	7.718685	4.89784	4.783316	4.532599	3.988243	5.192957	6.902743	4.521789	1702.9	413.5	425.9	6.0247
42	24	648	R 7	4	F	7F	74	4F	7F4	2091	7.602401	4.787492	4.574711	4.448516	4.136925	5.010635	6.770789	4.477337	1134.6	348.3	336.6	5.8530
42	25	649	R 7	1	M	7M	71	1M	7M1	2922	7.938446	5.123964	4.997212	4.714025	4.437107	5.505332	7.018402	4.779123	1228.9	423.2	240.8	6.0479
42	25	650	R 7	1	M	7M	71	1M	7M1	2570	7.806289	5.003946	4.832306	4.639572	4.329153	5.087596	6.919684	4.736198	1419.7	430.1	261.8	6.0641
42	26	651	C	1	F	CF	C1	1F	CF1	2204	7.658228	4.871373	4.68675	4.465908	4.061477	4.976734	6.786717	4.454347	1518.2	396.0	361.1	5.9815
42	26	652	C	1	F	CF	C1	1F	CF1	2416	7.747165	4.832306	4.695925	4.559126	4.12196	5.484797	6.784457	4.615121	1528.3	420.3	311.9	6.0410
42	27	653	R 7	3	M	7M	73	3M	7M3	2914	7.933438	5.102911	5.040194	4.584967	4.235699	5.55296	7.013016	4.828314	1191.1	525.7	325.6	6.2647
42	27	654	R 7	3	M	7M	73	3M	7M3	2575	7.816014	4.966335	4.844187	4.649187	4.284414	5.32301	6.948897	4.553877	1371.0	400.8	309.6	5.9935
42	28	655	C	4	F	CF	C4	4F	CF4	2190	7.654443	4.927254	4.600158	4.356709	4.041822	4.75359	6.881411	4.382027	1074.3	394.7	325.3	5.9781
42	28	656	C	4	F	CF	C4	4F	CF4	2410	7.744137	4.962845	4.649187	4.465908	4.151197	5.192957	6.886532	4.624973	1353.0	361.3	348.4	5.8896
42	29	657	C	3	M	CM	C3	3M	CM3	2578	7.804659	5.000585	4.770685	4.624973	3.937106	5.32301	6.912743	4.836282	1341.5	#VALUE! *		#VALUE!
42	29	658	C	3	M	CM	C3	3M	CM3	2873	7.908387	5.161925	5.000585	4.714025	4.153713	5.26269	6.993933	5.030438	1406.5	#VALUE!	297.4	#VALUE!
42	30	659	R 7	2	F	7F	72	2F	7F2	2423	7.747597	4.923624	4.695925	4.50535	4.159508	5.129899	6.899723	4.672829	1359.4	420.9	319.6	6.0424
42	30	660	R 7	2	F	7F	72	2F	7F2	2342	7.71913	4.934474	4.668145	4.59512	4.069539	5.123964	6.846943	4.51086	1430.5	376.2	340.0	5.9301
42	31	661	R 3	1	M	3M	31	1M	3M1	2839	7.913521	5.17615	5.040194	4.590057	4.415945	5.293305	7.011214	4.65396	1449.6	539.9	293.0	6.2914
42	31	662	R 3	1	M	3M	31	1M	3M1	2928	7.946264	5.090678	5.013963	4.749271	4.257455	5.278115	7.071573	4.634729	821.4	482.9	125.2	6.1799
42	32	663	C	3	F	CF	C3	3F	CF3	2438	7.760041	4.938065	4.804021	4.537961	4.130355	4.976734	6.899723	4.532599	1698.9	462.5	454.3	6.1367

42	32	664	C	3	F	CF	C3	3F	CF3	2555	7.809135	4.955827	4.783316	4.60517	4.276388	5.273	6.956545	4.521789	1691.5	422.2	483.1	6.0455
42	33	665	C	2	M	CM	C2	2M	CM2	3064	7.999007	5.247024	4.990433	4.770685	4.281101	5.365976	7.062192	4.454347	1484.5	399.6	283.8	5.9905
42	33	666	C	2	M	CM	C2	2M	CM2	2808	7.899524	5.20675	4.905275	4.677491	4.141387	5.337538	6.944087	4.718499	1208.9	467.1	238.4	6.1465
42	34	667	R 3	2	F	3F	32	2F	3F2	2227	7.66669	4.863681	4.610158	4.51086	3.955657	5.283204	6.744059	4.51086	1168.4	398.8	286.2	5.9885
42	34	668	R 3	2	F	3F	32	2F	3F2	2457	7.769801	4.934474	4.894101	4.527209	4.349503	4.990433	6.915723	4.488636	1167.2	382.4	355.7	5.9464
42	35	669	C	1	M	CM	C1	1M	CM1	2850	7.898782	5.147494	4.93087	4.658711	4.209754	5.411646	6.99851	5.049856	1602.1	488.7	271.7	6.1917
42	35	670	C	1	M	CM	C1	1M	CM1	2739	7.876259	4.959342	4.919981	4.620059	4.080077	5.111988	7.010312	4.65396	1439.8	456.4	201.8	6.1233
42	36	671	R 3	1	F	3F	31	1F	3F1	2136	7.627057	4.695925	4.516339	4.343805	4.153242	5.583496	6.694562	4.418841	1935.6	355.0	360.8	5.8722
42	36	672	R 3	1	F	3F	31	1F	3F1	2284	7.68156	4.812184	4.691348	4.436752	3.972742	5.342334	6.779922	4.75359	1829.7	367.0	340.8	5.9054
42	37	673	R 7	3	M	7M	73	3M	7M3	2905	7.92588	5.111988	4.945207	4.682131	4.134847	5.313206	7.064759	4.919981	1485.3	530.1	377.4	6.2731
42	37	674	R 7	3	M	7M	73	3M	7M3	2609	7.824446	4.923624	4.828314	4.672829	4.223177	5.247024	6.982863	4.682131	1446.8	426.0	363.0	6.0544
42	38	675	R 7	3	F	7F	73	3F	7F3	2614	7.838738	5.010635	4.718499	4.590057	4.341074	5.472271	7.018402	4.343805	1843.6	403.1	574.7	5.9992
42	38	676	R 7	3	F	7F	73	3F	7F3	2359	7.725771	4.89784	4.705016	4.483003	4.22347	5.356586	6.826545	4.532599	1912.2	386.1	434.7	5.9561
42	39	677	R 3	3	M	3M	33	3M	3M3	2438	7.756623	4.867534	4.795791	4.454347	4.306225	5.117994	6.914731	4.615121	1430.3	449.1	357.0	6.1073
42	39	678	R 3	3	M	3M	33	3M	3M3	2705	7.865188	5.078294	4.879007	4.714025	4.098669	5.010635	6.984716	4.60517	1365.2	450.6	256.6	6.1105
42	40	679	C	1	F	CF	C1	1F	CF1	2391	7.733246	4.832306	4.70953	4.375757	4.08648	5.676754	6.778785	4.682131	1995.4	407.3	332.5	6.0096
42	40	680	C	1	F	CF	C1	1F	CF1	2601	7.806289	4.997212	4.804021	4.695925	4.113003	5.303305	6.80017	4.976734	1756.3	440.6	262.6	6.0880
42	41	681	R 7	4	M	7M	74	4M	7M4	2539	7.801391	4.94876	4.740575	4.620059	4.260988	5.123964	7.045777	4.553877	1363.0	382.0	399.9	5.9455
42	41	682	R 7	4	M	7M	74	4M	7M4	2883	7.931285	5.049856	4.941642	4.610158	4.18586	5.159055	7.192182	4.60517	1472.6	445.2	427.8	6.0986
42	42	683	R 7	2	F	7F	72	2F	7F2	2287	7.682022	4.863681	4.590057	4.51086	4.005331	5.42495	6.793466	4.770685	1824.7	353.9	459.0	5.8691
42	42	684	R 7	2	F	7F	72	2F	7F2	2866	7.917901	5.043425	4.718499	4.727388	4.252203	5.288267	7.116394	4.787492	1550.2	459.0	442.5	6.1291
42	43	685	C	3	M	CM	C3	3M	CM3	3149	8.014997	5.308268	4.976734	4.812184	4.260988	5.267858	7.148346	4.812184	1380.9	523.9	305.7	6.2613
42	43	686	C	3	M	CM	C3	3M	CM3	2917	7.939872	5.170484	4.908972	4.615121	4.210793	5.075174	7.014814	4.70048	1519.7	488.1	350.8	6.1905
42	44	687	R 7	4	F	7F	74	4F	7F4	2482	7.776535	4.987025	4.70048	4.51086	4.427956	5.099866	6.943122	4.584967	1540.9	366.4	502.5	5.9037
42	44	688	R 7	4	F	7F	74	4F	7F4	2573	7.814803	4.962845	4.70953	4.59512	4.279855	5.407172	6.899723	4.564348	1771.8	401.3	536.4	5.9947
42	45	689	R 3	4	M	3M	34	4M	3M4	2421	7.757906	5.043425	4.774913	4.527209	4.138521	4.976734	6.928538	4.394449	1494.3	412.8	342.5	6.0230
42	45	690	R 3	4	M	3M	34	4M	3M4	2752	7.860185	4.828314	4.97328	4.749271	4.317221	5.068904	7.033506	5.075174	1383.2	431.2	410.2	6.0665
42	46	691	R 3	3	F	3F	33	3F	3F3	2369	7.727094	4.901564	4.783316	4.424847	4.131319	5.379897	6.837333	4.60517	1694.8	387.3	536.1	5.9591
42	46	692	R 3	3	F	3F	33	3F	3F3	2598	7.811973	4.966335	4.691348	4.49981	4.244917	5.4161	6.981935	4.85203	1762.5	398.2	574.2	5.9869
42	47	693	C	4	M	CM	C4	4M	CM4	2382	7.737616	4.941642	4.672829	4.5486	4.251063	4.962845	6.901737	4.488636 *		#VALUE! *		#VALUE!
42	47	694	C	4	M	CM	C4	4M	CM4	3052	7.987864	5.181784	4.990433	4.620059	4.268578	5.342334	7.090077	4.672829	1585.6	471.7	434.5	6.1564
42	48	695	R 3	2	F	3F	32	2F	3F2	2575	7.808323	4.987025	4.695925	4.553877	4.229458	5.484797	6.916715	4.736198 *		#VALUE! *		#VALUE!
42	48	696	R 3	2	F	3F	32	2F	3F2	2341	7.704812	4.615121	4.832306	4.483003	4.142023	5.365976	6.81564	4.804021	1797.7	374.3	398.6	5.9249

Appendix 2.1 Analysis of variance for 6-week body weight

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	36560	36560	12187	2.20	0.114
Trt	2	292762	292762	146381	26.46	0.000
Sex	1	1858894	1858894	1858894	336.05	0.000
Strain*Trt	6	25669	25669	4278	0.77	0.598
Strain*Sex	3	12228	12228	4076	0.74	0.540
Trt*Sex	2	35416	35416	17708	3.20	0.059
Strain*Trt*Sex	6	30648	30648	5108	0.92	0.496
Error	24	132760	132760	5532		
Total	47	2424937				

Appendix 2.2 Analysis of variance for 6-week food intake

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	213211	213211	71070	32.00	0.000
Trt	2	5419	5419	2709	1.22	0.313
Sex	1	522084	522084	522084	235.05	0.000
Strain*Trt	6	15984	15984	2664	1.20	0.340
Strain*Sex	3	1152	1152	384	0.17	0.914
Trt*Sex	2	137	137	69	0.03	0.970
Strain*Trt*Sex	6	29608	29608	4935	2.22	0.076
Error	24	53309	53309	2221		
Total	47	840904				

Appendix 2.3 Analysis of variance for 6-week feed conversion efficiency

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	30363	30363	10121	9.25	0.000
Trt	2	128	128	64	0.06	0.943
Sex	1	21931	21931	21931	20.04	0.000
Strain*Trt	6	2509	2509	418	0.38	0.883
Strain*Sex	3	2288	2288	763	0.70	0.563
Trt*Sex	2	280	280	140	0.13	0.881
Strain*Trt*Sex	6	2328	2328	388	0.35	0.900
Error	24	26259	26259	1094		
Total	47	86086				

Appendix 2.4 Analysis of variance for breast, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	71108	78367	26122	20.40	0.000
Trt	2	144192	152069	76035	59.38	0.000
Sex	1	28946	24050	24050	18.78	0.000
Age	5	11634156	11582685	2316537	1809.22	0.000
Strain*Trt	6	6001	5739	957	0.75	0.612
Strain*Sex	3	7301	6830	2277	1.78	0.151
Strain*Age	15	81407	79709	5314	4.15	0.000

Trt*Sex	2	20509	21159	10580	8.26	0.000
Trt*Age	10	68507	67163	6716	5.25	0.000
Sex*Age	5	24038	25462	5092	3.98	0.002
Strain*Trt*Sex	6	12767	13972	2329	1.82	0.094
Strain*Trt*Age	30	45860	45930	1531	1.20	0.223
Strain*Sex*Age	15	40558	37897	2526	1.97	0.016
Trt*Sex*Age	10	17855	18630	1863	1.45	0.154
Strain*Trt*Sex*Age	30	122600	122600	4087	3.19	0.000
Error	433	554416	554416	1280		
Total	576	12880222				

Appendix 2.5 Analysis of variance for breast skin, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	155.32	172.21	57.40	3.33	0.019
Trt	2	50.49	54.05	27.02	1.57	0.209
Sex	1	4.90	2.08	2.08	0.12	0.728
Age	5	42778.90	42646.56	8529.31	495.30	0.000
Strain*Trt	6	89.23	88.13	14.69	0.85	0.530
Strain*Sex	3	127.53	127.29	42.43	2.46	0.062
Strain*Age	15	366.13	368.22	24.55	1.43	0.131
Trt*Sex	2	30.86	30.64	15.32	0.89	0.412
Trt*Age	10	187.50	182.64	18.26	1.06	0.392
Sex*Age	5	208.55	209.76	41.95	2.44	0.034
Strain*Trt*Sex	6	138.95	139.81	23.30	1.35	0.232
Strain*Trt*Age	30	408.22	407.25	13.58	0.79	0.783
Strain*Sex*Age	15	465.18	460.38	30.69	1.78	0.035
Trt*Sex*Age	10	186.63	181.58	18.16	1.05	0.397
Strain*Trt*Sex*Age	30	376.11	376.11	12.54	0.73	0.854
Error	433	7456.41	7456.41	17.22		
Total	576	53030.92				

Appendix 2.6 Analysis of variance for breast bone, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	4.40	4.79	1.60	0.17	0.917
Trt	2	310.46	330.06	165.03	17.52	0.000
Sex	1	393.51	359.10	359.10	38.13	0.000
Age	5	68468.04	68319.71	13663.94	1450.84	0.000
Strain*Trt	6	38.14	39.74	6.62	0.70	0.647
Strain*Sex	3	2.41	2.74	0.91	0.10	0.962
Strain*Age	15	251.53	248.89	16.59	1.76	0.038
Trt*Sex	2	69.81	72.21	36.11	3.83	0.022
Trt*Age	10	288.63	282.21	28.22	3.00	0.001
Sex*Age	5	524.01	528.21	105.64	11.22	0.000
Strain*Trt*Sex	6	23.42	24.09	4.01	0.43	0.861
Strain*Trt*Age	30	306.84	305.91	10.20	1.08	0.353
Strain*Sex*Age	15	159.00	150.52	10.03	1.07	0.387
Trt*Sex*Age	10	59.58	61.64	6.16	0.65	0.767
Strain*Trt*Sex*Age	30	380.29	380.29	12.68	1.35	0.108
Error	433	4077.98	4077.98	9.42		
Total	576	75358.06				

Appendix 2.7 Analysis of variance for thigh, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	179	132	44	0.30	0.825
Trt	2	4355	4808	2404	16.41	0.000
Sex	1	6466	6111	6111	41.71	0.000
Age	5	1261222	1260639	252128	1721.00	0.000
Strain*Trt	6	825	820	137	0.93	0.471
Strain*Sex	3	519	526	175	1.20	0.311
Strain*Age	15	3688	3687	246	1.68	0.052
Trt*Sex	2	1226	1228	614	4.19	0.016
Trt*Age	10	2971	2975	297	2.03	0.029
Sex*Age	5	6522	6526	1305	8.91	0.000
Strain*Trt*Sex	6	1698	1698	283	1.93	0.074
Strain*Trt*Age	30	7197	7198	240	1.64	0.020
Strain*Sex*Age	15	2666	2670	178	1.22	0.256
Trt*Sex*Age	10	1172	1170	117	0.80	0.630
Strain*Trt*Sex*Age	30	15480	15480	516	3.52	0.000
Error	434	63581	63581	147		
Total	577	1379766				

Appendix 2.8 Analysis of variance for drum, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	805.4	741.5	247.2	2.50	0.059
Trt	2	5199.6	5558.5	2779.2	28.16	0.000
Sex	1	9484.1	9160.6	9160.6	92.82	0.000
Age	5	887850.8	887592.0	177518.4	1798.74	0.000
Strain*Trt	6	324.8	330.6	55.1	0.56	0.764
Strain*Sex	3	267.9	276.6	92.2	0.93	0.424
Strain*Age	15	3997.2	3992.0	266.1	2.70	0.001
Trt*Sex	2	1139.1	1145.7	572.8	5.80	0.003
Trt*Age	10	2335.1	2339.0	233.9	2.37	0.010
Sex*Age	5	9507.9	9507.3	1901.5	19.27	0.000
Strain*Trt*Sex	6	1536.8	1536.8	256.1	2.60	0.018
Strain*Trt*Age	30	2092.5	2096.5	69.9	0.71	0.875
Strain*Sex*Age	15	979.2	982.4	65.5	0.66	0.820
Trt*Sex*Age	10	1367.1	1365.1	136.5	1.38	0.185
Strain*Trt*Sex*Age	30	8264.0	8264.0	275.5	2.79	0.000
Error	434	42831.6	42831.6	98.7		
Total	577	977983.1				

Appendix 2.9 Analysis of variance for wing, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	192.4	251.1	83.7	1.49	0.217
Trt	2	2451.9	2634.4	1317.2	23.43	0.000
Sex	1	3067.1	2925.2	2925.2	52.02	0.000
Age	5	543041.4	542853.1	108570.6	1930.82	0.000
Strain*Trt	6	193.5	192.3	32.1	0.57	0.754

Strain*Sex	3	102.7	103.7	34.6	0.61	0.606
Strain*Age	15	1264.4	1264.3	84.3	1.50	0.101
Trt*Sex	2	533.8	534.2	267.1	4.75	0.009
Trt*Age	10	1464.4	1464.4	146.4	2.60	0.004
Sex*Age	5	2965.7	2970.9	594.2	10.57	0.000
Strain*Trt*Sex	6	552.9	552.8	92.1	1.64	0.135
Strain*Trt*Age	30	1804.0	1804.1	60.1	1.07	0.370
Strain*Sex*Age	15	713.1	713.1	47.5	0.85	0.627
Trt*Sex*Age	10	409.1	410.2	41.0	0.73	0.697
Strain*Trt*Sex*Age	30	5550.4	5550.4	185.0	3.29	0.000
Error	434	24404.0	24404.0	56.2		
Total	577	588710.7				

Appendix 2.10 Analysis of variance for liver, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	357.7	384.1	128.0	3.27	0.021
Trt	2	552.6	589.7	294.8	7.52	0.001
Sex	1	2122.4	1985.7	1985.7	50.65	0.000
Age	5	225407.2	224673.9	44934.8	1146.15	0.000
Strain*Trt	6	426.5	425.3	70.9	1.81	0.096
Strain*Sex	3	310.9	329.3	109.8	2.80	0.040
Strain*Age	15	512.3	531.9	35.5	0.90	0.559
Trt*Sex	2	86.3	91.8	45.9	1.17	0.311
Trt*Age	10	743.2	758.0	75.8	1.93	0.039
Sex*Age	5	2505.3	2511.4	502.3	12.81	0.000
Strain*Trt*Sex	6	369.3	369.0	61.5	1.57	0.155
Strain*Trt*Age	30	1347.5	1348.3	44.9	1.15	0.275
Strain*Sex*Age	15	679.9	679.0	45.3	1.15	0.305
Trt*Sex*Age	10	499.6	481.9	48.2	1.23	0.270
Strain*Trt*Sex*Age	30	1589.6	1589.6	53.0	1.35	0.105
Error	433	16975.7	16975.7	39.2		
Total	576	254486.1				

Appendix 2.11 Analysis of variance for remainder, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	1427	759	253	0.06	0.979
Trt	2	105170	115312	57656	14.60	0.000
Sex	1	374203	342144	342144	86.64	0.000
Age	5	47683037	47499619	9499924	2405.75	0.000
Strain*Trt	6	25445	25202	4200	1.06	0.384
Strain*Sex	3	18947	17782	5927	1.50	0.214
Strain*Age	15	67270	68608	4574	1.16	0.302
Trt*Sex	2	39210	40954	20477	5.19	0.006
Trt*Age	10	77880	76524	7652	1.94	0.039
Sex*Age	5	352846	359134	71827	18.19	0.000
Strain*Trt*Sex	6	20709	22198	3700	0.94	0.468
Strain*Trt*Age	30	211627	211685	7056	1.79	0.007
Strain*Sex*Age	15	114376	102874	6858	1.74	0.042
Trt*Sex*Age	10	29898	32279	3228	0.82	0.612
Strain*Trt*Sex*Age	30	303941	303941	10131	2.57	0.000
Error	433	1709851	1709851	3949		
Total	576	51135835				

Appendix 2.12 Analysis of variance for feather weight, over 6-week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	1237	1050	350	0.70	0.553
Trt	2	2190	2488	1244	2.48	0.085
Sex	1	163	225	225	0.45	0.503
Age	5	1087939	1087633	217527	434.26	0.000
Strain*Trt	6	2170	2166	361	0.72	0.633
Strain*Sex	3	720	736	245	0.49	0.690
Strain*Age	15	11946	11951	797	1.59	0.073
Trt*Sex	2	1587	1597	799	1.59	0.204
Trt*Age	10	6298	6299	630	1.26	0.252
Sex*Age	5	1291	1293	259	0.52	0.764
Strain*Trt*Sex	6	2516	2517	420	0.84	0.541
Strain*Trt*Age	30	20939	20958	699	1.39	0.083
Strain*Sex*Age	15	11654	11648	777	1.55	0.084
Trt*Sex*Age	10	3340	3341	334	0.67	0.755
Strain*Trt*Sex*Age	30	17664	17664	589	1.18	0.243
Error	434	217398	217398	501		
Total	577	1389050				

Appendix 2.13 Analysis of variance for 12-week body weight

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	614352	614352	204784	2.44	0.089
Trt	2	108199	108199	54099	0.64	0.534
Sex	1	19171088	19171088	19171088	228.01	0.000
Strain*Trt	6	269858	269858	44976	0.53	0.776
Strain*Sex	3	180713	180713	60238	0.72	0.552
Trt*Sex	2	46199	46199	23100	0.27	0.762
Strain*Trt*Sex	6	218950	218950	36492	0.43	0.849
Error	24	2017959	2017959	84082		
Total	47	22627317				

Appendix 2.14 Analysis of variance for 12-week food intake

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	597638	597638	199213	4.19	0.016
Trt	2	5525	5525	2762	0.06	0.944
Sex	1	662700	662700	662700	13.94	0.001
Strain*Trt	6	235483	235483	39247	0.83	0.561
Strain*Sex	3	182826	182826	60942	1.28	0.303
Trt*Sex	2	4688	4688	2344	0.05	0.952
Strain*Trt*Sex	6	47279	47279	7880	0.17	0.984
Error	24	1140754	1140754	47531		
Total	47	2876893				

Appendix 2.15 Analysis of variance for 12-week feed conversion efficiency

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	32475	32475	10825	2.85	0.059
Trt	2	24529	24529	12264	3.23	0.057
Sex	1	213	213	213	0.06	0.815
Strain*Trt	6	31144	31144	5191	1.37	0.268
Strain*Sex	3	13322	13322	4441	1.17	0.343
Trt*Sex	2	9123	9123	4562	1.20	0.319
Strain*Trt*Sex	6	26307	26307	4384	1.15	0.363
Error	24	91251	91251	3802		
Total	47	228362				

Appendix 2.16 Analysis of variance for breast, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	964996	1006447	335482	41.04	0.000
Trt	2	284933	320345	160172	19.60	0.000
Sex	1	1178975	1132666	1132666	138.57	0.000
Age	8	123415039	123327936	15415992	1885.97	0.000
Strain*Trt	6	15405	15984	2664	0.33	0.923
Strain*Sex	3	21226	20049	6683	0.82	0.484
Strain*Age	24	1232629	1234372	51432	6.29	0.000
Trt*Sex	2	20202	20512	10256	1.25	0.286
Trt*Age	16	430011	429317	26832	3.28	0.000
Sex*Age	8	1681559	1678637	209830	25.67	0.000

Strain*Trt*Sex	6	28889	29982	4997	0.61	0.721
Strain*Trt*Age	48	219610	219669	4576	0.56	0.993
Strain*Sex*Age	24	117165	114903	4788	0.59	0.943
Trt*Sex*Age	16	82131	83945	5247	0.64	0.851
Strain*Trt*Sex*Age	48	221144	221144	4607	0.56	0.993
Error	649	5304949	5304949	8174		
Total	864	135218864				

Appendix 2.17 Analysis of variance for breast skin, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	452.9	495.8	165.3	1.43	0.232
Trt	2	547.1	542.8	271.4	2.35	0.096
Sex	1	690.9	633.0	633.0	5.48	0.020
Age	8	451616.2	451371.5	56421.4	488.65	0.000
Strain*Trt	6	890.5	887.1	147.9	1.28	0.264
Strain*Sex	3	206.6	206.4	68.8	0.60	0.618
Strain*Age	24	1382.2	1383.6	57.7	0.50	0.979
Trt*Sex	2	315.5	313.3	156.7	1.36	0.258
Trt*Age	16	2281.6	2268.6	141.8	1.23	0.241
Sex*Age	8	1580.3	1578.8	197.4	1.71	0.093
Strain*Trt*Sex	6	1396.1	1406.0	234.3	2.03	0.060
Strain*Trt*Age	48	5642.9	5643.8	117.6	1.02	0.442
Strain*Sex*Age	24	2628.1	2623.2	109.3	0.95	0.537
Trt*Sex*Age	16	2688.6	2688.5	168.0	1.46	0.111
Strain*Trt*Sex*Age	48	5097.8	5097.8	106.2	0.92	0.629
Error	649	74936.5	74936.5	115.5		
Total	864	552353.7				

Appendix 2.18 Analysis of variance for breast bone, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	154.7	135.0	45.0	1.00	0.392
Trt	2	312.3	377.8	188.9	4.20	0.015
Sex	1	14458.4	14175.8	14175.8	314.93	0.000
Age	8	436377.7	436469.9	54558.7	1212.07	0.000
Strain*Trt	6	313.1	327.2	54.5	1.21	0.298
Strain*Sex	3	53.8	57.3	19.1	0.42	0.736
Strain*Age	24	1175.0	1164.5	48.5	1.08	0.364
Trt*Sex	2	4.5	5.0	2.5	0.06	0.946
Trt*Age	16	1146.6	1138.8	71.2	1.58	0.068
Sex*Age	8	21307.6	21288.1	2661.0	59.12	0.000
Strain*Trt*Sex	6	96.1	99.0	16.5	0.37	0.900
Strain*Trt*Age	48	1129.8	1132.3	23.6	0.52	0.997
Strain*Sex*Age	24	806.9	801.6	33.4	0.74	0.810
Trt*Sex*Age	16	765.6	767.9	48.0	1.07	0.384
Strain*Trt*Sex*Age	48	1663.7	1663.7	34.7	0.77	0.870
Error	649	29213.4	29213.4	45.0		
Total	864	508979.1				

Appendix 2.19 Analysis of variance for thigh, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	3690	3859	1286	2.44	0.064
Trt	2	607	966	483	0.91	0.401
Sex	1	181479	176658	176658	334.59	0.000
Age	8	10054837	10053333	1256667	2380.11	0.000
Strain*Trt	6	2441	2359	393	0.74	0.614
Strain*Sex	3	487	520	173	0.33	0.805
Strain*Age	24	27887	27879	1162	2.20	0.001
Trt*Sex	2	36	31	16	0.03	0.971
Trt*Age	16	25126	25070	1567	2.97	0.000
Sex*Age	8	235459	235690	29461	55.80	0.000
Strain*Trt*Sex	6	2407	2375	396	0.75	0.610
Strain*Trt*Age	48	35901	35886	748	1.42	0.037
Strain*Sex*Age	24	13980	13981	583	1.10	0.334
Trt*Sex*Age	16	8091	8092	506	0.96	0.502
Strain*Trt*Sex*Age	48	21512	21512	448	0.85	0.756
Error	650	343191	343191	528		
Total	865	10957131				

Appendix 2.20 Analysis of variance for drum, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	4144	3890	1297	4.40	0.004
Trt	2	2330	3072	1536	5.21	0.006
Sex	1	186223	182384	182384	618.54	0.000
Age	8	6704116	6703982	837998	2841.99	0.000
Strain*Trt	6	2476	2488	415	1.41	0.210
Strain*Sex	3	92	94	31	0.11	0.956
Strain*Age	24	11839	11793	491	1.67	0.024
Trt*Sex	2	2936	3060	1530	5.19	0.006
Trt*Age	16	12136	12082	755	2.56	0.001
Sex*Age	8	210312	210278	26285	89.14	0.000
Strain*Trt*Sex	6	2541	2541	423	1.44	0.198
Strain*Trt*Age	48	16039	16039	334	1.13	0.254
Strain*Sex*Age	24	5721	5721	238	0.81	0.728
Trt*Sex*Age	16	14112	14116	882	2.99	0.000
Strain*Trt*Sex*Age	48	14469	14469	301	1.02	0.434
Error	650	191661	191661	295		
Total	865	7381148				

Appendix 2.21 Analysis of variance for wing, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	785	1120	373	2.99	0.030
Trt	2	1575	2019	1009	8.08	0.000
Sex	1	68660	66859	66859	535.54	0.000
Age	8	3675645	3674933	459367	3679.51	0.000
Strain*Trt	6	1716	1719	287	2.30	0.034
Strain*Sex	3	83	89	30	0.24	0.871
Strain*Age	24	3590	3589	150	1.20	0.235
Trt*Sex	2	1191	1224	612	4.90	0.008

Trt*Age	16	3153	3134	196	1.57	0.072
Sex*Age	8	83465	83479	10435	83.58	0.000
Strain*Trt*Sex	6	764	762	127	1.02	0.413
Strain*Trt*Age	48	11433	11433	238	1.91	0.000
Strain*Sex*Age	24	2650	2650	110	0.88	0.624
Trt*Sex*Age	16	1941	1940	121	0.97	0.487
Strain*Trt*Sex*Age	48	8770	8770	183	1.46	0.025
Error	650	81149	81149	125		
Total	865	3946569				

Appendix 2.22 Analysis of variance for liver, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	591.1	501.3	167.1	1.49	0.215
Trt	2	893.1	1028.5	514.3	4.60	0.010
Sex	1	15485.4	15056.4	15056.4	134.67	0.000
Age	8	737052.4	736805.1	92100.6	823.81	0.000
Strain*Trt	6	549.7	557.0	92.8	0.83	0.547
Strain*Sex	3	304.5	314.4	104.8	0.94	0.422
Strain*Age	24	3866.0	3868.4	161.2	1.44	0.080
Trt*Sex	2	461.6	473.1	236.5	2.12	0.121
Trt*Age	16	2223.3	2213.9	138.4	1.24	0.233
Sex*Age	8	14150.4	14158.8	1769.9	15.83	0.000
Strain*Trt*Sex	6	1246.4	1256.3	209.4	1.87	0.083
Strain*Trt*Age	48	4908.0	4900.4	102.1	0.91	0.641
Strain*Sex*Age	24	3096.1	3093.9	128.9	1.15	0.279
Trt*Sex*Age	16	2429.6	2408.7	150.5	1.35	0.163
Strain*Trt*Sex*Age	48	4150.2	4150.2	86.5	0.77	0.866
Error	649	72557.2	72557.2	111.8		
Total	864	863965.0				

Appendix 2.23 Analysis of variance for gut, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	123336	120180	40060	22.66	0.000
Trt	2	26103	28376	14188	8.02	0.000
Sex	1	89192	86305	86305	48.81	0.000
Age	8	9227814	9225780	1153223	652.19	0.000
Strain*Trt	6	6024	6190	1032	0.58	0.744
Strain*Sex	3	1809	1863	621	0.35	0.788
Strain*Age	24	169439	169632	7068	4.00	0.000
Trt*Sex	2	2004	2005	1003	0.57	0.567
Trt*Age	16	84618	84390	5274	2.98	0.000
Sex*Age	8	101747	101696	12712	7.19	0.000
Strain*Trt*Sex	6	10097	10005	1668	0.94	0.463
Strain*Trt*Age	48	86456	86642	1805	1.02	0.437
Strain*Sex*Age	24	49716	48387	2016	1.14	0.293
Trt*Sex*Age	16	31086	31299	1956	1.11	0.345
Strain*Trt*Sex*Age	48	123092	123092	2564	1.45	0.028
Error	649	1147582	1147582	1768		
Total	864	11280115				

Appendix 2.24 Analysis of variance for remainder, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	35593	30173	10058	0.85	0.467
Trt	2	45893	45272	22636	1.91	0.148
Sex	1	5259020	5108703	5108703	431.86	0.000
Age	8	324292215	324243108	40530388	3426.21	0.000
Strain*Trt	6	61524	60663	10111	0.85	0.528
Strain*Sex	3	54214	53998	17999	1.52	0.208
Strain*Age	24	331867	330091	13754	1.16	0.269
Trt*Sex	2	8772	9670	4835	0.41	0.665
Trt*Age	16	767299	762183	47636	4.03	0.000
Sex*Age	8	5176821	5179341	647418	54.73	0.000
Strain*Trt*Sex	6	98364	100430	16738	1.41	0.206
Strain*Trt*Age	48	851327	850092	17710	1.50	0.019
Strain*Sex*Age	24	328822	318796	13283	1.12	0.312
Trt*Sex*Age	16	181529	185181	11574	0.98	0.479
Strain*Trt*Sex*Age	48	676954	676954	14103	1.19	0.181
Error	649	7677346	7677346	11830		
Total	864	345847561				

Appendix 2.25 Analysis of variance for feather weight, over 12- week period

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Strain	3	3666	3075	1025	0.98	0.401
Trt	2	1053	1273	637	0.61	0.544
Sex	1	10529	9457	9457	9.05	0.003
Age	8	7095717	7093659	886707	848.26	0.000
Strain*Trt	6	8220	8206	1368	1.31	0.251
Strain*Sex	3	4851	4831	1610	1.54	0.203
Strain*Age	24	33176	33131	1380	1.32	0.141
Trt*Sex	2	1992	2016	1008	0.96	0.382
Trt*Age	16	15759	15737	984	0.94	0.522
Sex*Age	8	46669	46722	5840	5.59	0.000
Strain*Trt*Sex	6	4060	4057	676	0.65	0.693
Strain*Trt*Age	48	61714	61706	1286	1.23	0.143
Strain*Sex*Age	24	42842	42841	1785	1.71	0.019
Trt*Sex*Age	16	15653	15654	978	0.94	0.527
Strain*Trt*Sex*Age	48	51508	51508	1073	1.03	0.427
Error	650	679459	679459	1045		
Total	865	8076866				

				12-Apr			18-Apr Week-1								25-Apr Week-2								02-May Week-3					
									Feed Out								Feed Out								Feed Out			
Pen	Trt	Strain	Sex	Bird No	Bird Wt	Feed In	Bird No	Bird Wt	F1	F2	F3	Bag	Feeder wt.	Total f.out	Bird No	Bird Wt	F1	F2	F3	Feeder Wt	Total f.out	Feed In	Bird No	Bird Wt	F1	F2	F3	Bag
1	2	R 7	M	64	2622	60.10	63	4.96	7.1	7.6	6.9	35.2	4.4	52.5	61	12.98	11.4	10.7	9.6	4.4	27.3	52.1	59	25.94	5.7	5.1	5.4	35.6
2	3	C	F	64	2758	49.95	64	5.00	6.4	5.6	5.9	28.0	4.4	41.4	62	13.30	10.3	6.1	8.3	4.4	20.4	49.9	60	27.26	6.0	6.0	3.3	23.6
3	2	C	M	64	2693	55.35	64	5.08	8.8	7.9	8.9	26.1	4.5	47.2	61	14.34	10.2	10.4	10.7	4.5	26.8	49.5	59	30.10	5.0	4.4	4.9	29.1
4	1	R 3	F	64	2588	50.05	63	5.84	5.8	7.5	6.7	25.1	4.4	40.7	61	15.22	10.4	8.1	6.4	4.4	20.5	49.9	59	28.82	6.4	5.4	3.8	24.2
5	3	H	M	64	2659	50.15	63	4.98	6.0	7.0	6.4	25.2	4.4	40.3	61	13.02	6.8	9.2	7.6	4.4	19.3	50.0	59	27.18	4.3	6.2	3.9	24.2
6	1	C	F	64	2794	50.10	64	5.52	6.0	8.1	6.6	25.6	4.5	41.8	62	15.26	9.2	6.6	8.4	4.5	19.7	50.0	60	28.60	6.1	4.2	4.9	21.5
7	1	R 3	M	64	2635	49.70	64	5.56	6.1	6.4	6.8	25.0	4.4	39.9	62	15.60	9.5	7.1	6.0	4.4	18.2	49.9	58	31.20	5.2	5.0	4.7	19.7
8	2	H	F	64	2588	53.25	61	5.36	7.7	7.3	8.2	25.7	4.4	44.5	59	13.70	9.3	10.1	9.5	4.4	24.6	52.0	56	26.14	7.2	8.5	6.5	29.3
9	1	H	M	64	2651	50.05	61	5.68	7.6	7.1	7.9	22.8	4.5	40.9	59	16.34	8.2	6.2	10.1	4.5	19.9	50.0	57	31.16	5.2	4.8	5.9	21.3
10	2	R 7	F	64	2569	54.45	64	5.32	4.9	6.0	6.8	35.2	4.3	48.6	62	13.86	8.9	9.9	10.6	4.3	25.1	52.2	60	26.00	6.3	7.1	5.9	29.9
11	1	R 7	M	64	2495	50.05	62	5.58	6.1	6.0	7.3	25.9	4.5	40.7	60	15.56	7.4	7.0	9.8	4.5	19.7	49.9	58	30.12	5.4	4.7	4.6	22.7
12	1	H	F	64	2604	50.05	61	5.78	6.1	5.6	7.3	27.3	4.4	41.9	59	14.84	8.5	9.4	9.5	4.4	23.0	50.0	56	28.30	8.2	7.2	3.8	27.7
13	3	C	M	64	2775	50.05	64	4.84	5.6	6.8	6.3	27.4	4.4	41.7	62	13.40	7.7	7.4	9.7	4.4	20.5	49.8	60	27.40	5.5	7.2	4.0	22.4
14	1	C	F	64	2702	50.00	64	5.52	6.3	7.0	7.9	24.9	4.3	41.9	62	14.94	5.4	9.2	10.4	4.3	20.8	49.9	60	28.98	4.5	7.4	4.8	22.7
15	1	R 7	M	64	2611	50.10	63	5.92	7.1	6.0	7.1	25.3	4.4	41.2	61	16.66	8.8	5.8	7.7	4.4	18.0	50.1	58	33.24	4.3	5.1	3.7	20.3
16	1	R 3	F	64	2626	50.05	63	5.78	6.5	6.8	7.4	25.0	4.3	41.3	60	15.42	7.6	7.9	9.2	4.3	20.5	49.9	59	28.10	6.0	6.3	4.1	23.8
17	2	R 7	M	64	2564	57.55	63	5.14	6.4	6.7	7.9	32.6	4.3	49.3	61	13.78	11.3	10.8	10.6	4.3	28.4	51.9	58	27.12	7.0	6.0	4.9	33.1
18	2	R 7	F	64	2561	51.85	63	5.40	6.1	7.9	6.8	26.7	4.5	43.1	61	13.96	8.6	9.3	9.2	4.5	22.5	48.8	59	26.26	6.3	6.0	5.4	26.6
19	1	C	M	64	2815	50.05	63	5.42	5.7	5.7	7.2	27.9	4.3	42.2	60	15.46	8.0	7.9	9.5	4.3	21.1	49.9	57	31.96	5.8	5.5	4.2	23.2
20	2	H	F	64	2660	49.60	61	5.24	6.5	7.6	7.4	24.0	4.5	40.9	58	13.60	6.8	7.9	9.6	4.5	19.9	49.8	56	25.70	6.9	8.3	5.5	24.0
21	3	H	M	64	2638	49.95	62	5.00	6.0	6.7	6.2	22.5	4.3	37.0	60	12.96	7.9	7.9	7.0	4.3	18.5	49.9	58	25.04	7.2	6.1	3.2	25.2
22	2	R 3	F	64	2604	52.55	63	5.16	7.0	7.5	7.5	26.6	4.3	44.3	61	13.14	10.0	10.1	9.8	4.3	25.6	52.9	59	24.80	7.6	7.3	6.9	30.6
23	2	R 3	M	64	2680	43.05	62	5.40	7.3	5.5	7.1	19.0	4.3	34.5	59	13.90	6.3	6.6	7.0	4.3	15.6	49.4	57	26.40	4.9	5.9	6.5	19.1
24	1	H	F	64	2651	50.10	62	5.62	6.1	7.3	6.1	26.8	4.3	42.1	60	15.44	10.0	6.9	9.4	4.3	22.1	50.0	57	27.90	6.4	6.5	5.8	25.5
25	1	R 3	M	64	2681	50.10	64	5.92	6.3	4.7	6.2	28.1	4.5	40.8	61	15.80	8.8	6.9	7.8	4.5	19.0	49.9	59	30.18	4.8	5.8	5.3	20.1
26	1	R 7	F	64	2604	50.00	63	5.48	5.8	5.9	6.0	27.7	4.5	41.0	61	14.60	8.3	7.2	9.8	4.5	20.8	50.0	59	27.86	6.0	5.8	4.5	24.8
27	3	R 3	M	64	2710	50.00	64	5.12	6.7	5.6	6.5	25.6	4.3	40.1	62	12.96	7.7	7.1	7.9	4.3	18.4	49.8	60	26.22	6.7	6.4	3.2	21.7
28	3	H	F	64	2647	49.95	63	5.30	5.9	5.9	5.9	27.3	4.3	40.8	61	13.46	6.8	7.8	10.1	4.3	20.5	49.9	59	25.82	5.8	6.1	5.2	27.0
29	3	R 7	M	64	2570	50.05	62	4.82	7.3	6.6	6.8	24.3	4.5	40.5	57	12.36	9.8	6.1	9.2	4.5	20.7	49.7	55	24.12	5.9	8.0	4.3	27.9
30	2	C	F	64	2778	53.95	64	5.16	7.3	6.1	6.1	30.7	4.3	45.9	60	13.78	10.2	9.7	9.9	4.3	25.5	50.1	59	26.88	8.9	5.8	5.4	27.5
31	2	H	M	64	2623	52.60	63	5.32	7.8	6.9	6.9	26.7	4.4	43.9	61	13.74	8.7	7.0	9.3	4.4	20.7	48.7	59	28.18	5.02	6.62	6.40	21.7
32	3	R 3	F	64	2659	50.00	64	5.22	5.1	4.9	5.4	28.9	4.5	39.8	62	12.78	9.3	6.9	7.9	4.5	19.6	49.9	60	24.58	6.88	5.72	4.46	23.8
33	2	C	M	64	2790	55.70	64	5.02	6.9	8.6	6.9	29.8	4.5	47.7	62	13.96	10.2	10.6	10.3	4.5	26.6	49.6	60	29.30	5.52	5.76	3.34	29.6
34	3	R 7	F	64	2576	49.95	64	5.10	6.9	7.4	7.5	22.6	4.4	39.9	62	13.20	7.1	7.7	8.5	4.4	19.0	49.9	60	25.36	6.68	5.64	5.24	24.0
35	1	H	M	64	2633	50.05	64	5.76	4.6	5.2	5.4	30.0	4.5	40.6	62	15.46	8.6	5.5	9.7	4.5	19.3	50.1	59	31.02	5.82	5.88	5.28	20.1
36	3	C	F	64	2671	50.05	62	4.76	4.4	4.3	4.8	32.3	4.5	41.2	60	11.90	7.2	8.7	10.4	4.5	21.7	50.0	58	24.94	7.00	5.74	4.08	28.1
37	3	R 3	M	64	2646	50.05	64	4.70	5.0	4.9	5.3	28.3	4.4	39.1	62	11.84	7.0	8.6	8.3	4.4	19.5	49.9	60	24.74	4.98	7.22	3.72	24.6
38	3	R 7	F	64	2627	49.95	64	4.84	6.3	5.1	7.0	23.9	4.3	38.0	62	12.66	5.8	6.5	9.0	4.3	17.0	50.0	60	23.92	6.06	6.48	4.26	23.6
39	2	H	M	64	2664	46.70	64	5.42	6.4	5.0	7.5	23.2	4.5	37.7	62	14.26	6.8	5.4	7.6	4.5	15.3	51.9	60	28.48	6.12	6.06	4.42	20.3
40	1	R 7	F	64	2590	50.05	64	5.68	5.8	7.7	6.1	23.6	4.4	38.8	61	15.48	6.0	8.4	7.9	4.4	17.9	50.0	58	29.00	5.50	6.36	4.60	21.4
41	3	R 7	M	64	2575	50.10	63	4.66	6.2	6.2	6.1	24.8	4.3	39.0	61	12.28	9.1	4.9	6.7	4.3	16.4	49.9	59	26.18	5.26	6.22	3.46	22.8
42	2	C	F	64	2768	52.45	64	5.08	6.0	7.0	6.3	29.3	4.3	44.2	62	13.96	8.9	9.9	9.4	4.3	24.0	49.3	60	27.18	4.96	6.14	6.36	26.3
43	1	C	M	64	2766	49.95	64	5.68	5.8	4.8	6.4	28.6	4.4	41.2	62	16.48	6.2	6.9	9.4	4.4	18.0	49.8	60	33.88	4.86	4.70	4.84	15.3
44	3	H	F	64	2652	49.90	60	5.04	6.1	5.3	6.6	27.3	4.4	41.0	58	13.02	8.8	9.6	7.9	4.4	22.0	49.8	56	25.72	8.28	6.80	5.30	25.2
45	2	R 3	M	64	2629	48.00	63	5.36	5.7	5.7	5.4	27.3	4.5	39.6	62	13.88	8.1	8.2	8.2	4.5	20.2	52.4	60	26.74	4.76	4.46	6.18	26.4
46	3	R 3	F	64	2533	49.95	62	4.94	5.6	4.0	5.8	28.5	4.4	39.5	60	12.56	9.3	5.2	9.4	4.4	19.5	49.8	58	25.86	8.08	6.90	4.36	22.3
47	3	C	M	64	2788	49.95	64	4.66	4.2	4.9	5.6	29.9	4.2	40.3	61	12.90	8.2	7.7	7.2	4.2	18.9	50.0	59	27.30	6.28	7.14	4.22	17.8
48	2	R 3	F	64	2627	52.00	62	5.00	4.8	5.4	6.0	31.7	4.4	43.6	60	12.46	9.7	9.4	9.4	4.4	24.1	53.0	58	25.16	6.80	6.04	7.06	28.0

		05-May	09-May Week-4									16-May Week-5											23-May Week-6					
		Finisher									10-May																	
Fder wt.	Total f.out	Feed In	Bird No	Bird Wt	F1	F2	F3	Bag	Fder wt.	Total f.out	Feed In	Bird No	Bird No_A	Bird Wt	F1	F2	F3	Bag	Fder wt.	Total f.out	Feed In	bird no_B	bird no.	Bird Wt	F1	F2	F3	Bag
4.4	47.3	46.3	57	44.0	7.8	8.0	7.2	23.4	4.4	42.0	49.7	55	38	64.0	2.6	6.9	9.6	6.3	4.4	21.0	70.6	53	37	84.3	9.42	8.46	6.64	14.55
4.4	34.4	51.4	58	43.7	8.2	8.0	4.2	19.9	4.4	35.9	50.6	56	39	60.1	9.1	8.3	3.6	12.9	4.4	29.5	49.2	54	38	76.8	11.32	10.7	6.94	10.75
4.5	39.0	44.4	56	49.1	5.9	5.9	7.9	14.9	4.5	30.2	46.9	53	36	69.1	3.9	5.4	8.3		4.5	13.2	70.8	51	35	88.7	8.64	10.22	9.88	14.55
4.4	35.4	50.2	57	45.6	9.6	5.5	5.0	19.3	4.4	35.0	50.6	55	38	63.5	9.6	8.4	2.7	8.9	4.4	25.2	49.0	53	38	80.2	10.04	9.44	7.62	2.6
4.4	34.2	51.7	57	42.6	6.8	8.9	7.0	17.8	4.4	36.1	51.0	54	37	63.1	7.9	8.7	4.9	7.2	4.4	24.3	49.4	52	35	86.4	10.58	10.26	7.36	3.15
4.5	32.2	49.7	58	46.5	8.2	5.4	6.8	14.3	4.5	30.2	50.3	56	39	65.1	9.4	6.4	4.5	5.9	4.5	21.6	49.9	54	39	80.8	11.24	11.02	5.86	1.75
4.4	30.1	50.3	53	50.1	6.9	7.3	5.4	10.0	4.4	25.2	49.7	53	34	71.2	4.6	4.0	3.1		4.4	7.3	60.4	49	33	95.7	8.06	6.84	5.1	
4.4	47.1	45.6	52	42.3	7.6	9.4	9.3	31.4	4.4	53.2	47.1	50	33	60.6	5.1	8.2	10.0	31.2	4.4	50.1	50.8	48	33	76.9	10.22	10.62	10.6	36.95
4.5	32.6	50.7	55	50.3	6.1	7.8	7.7	12.5	4.5	29.6	49.0	52	35	72.3	6.3	9.5	3.3		4.5	14.7	61.9	50	35	94.6	10.68	9.44	5.78	8.35
4.3	44.8	46.6	57	42.3	8.5	7.7	8.0	25.1	4.3	45.0	48.3	55	38	59.1	4.5	7.7	8.8	18.7	4.3	35.4	50.3	53	38	74.4	8.58	9.7	9.3	18.1
4.5	32.9	50.5	56	48.7	6.1	7.6	7.2	13.1	4.5	29.4	50.1	53	37	70.2	5.5	5.7	6.2		4.5	12.9	61.1	52	37	90.8	8.56	8.72	9.5	
4.4	42.4	49.5	53	44.7	9.3	9.1	5.3	31.8	4.4	51.1	49.9	51	35	60.8	7.7	8.0	6.6	34.3	4.4	52.2	50.3	50	35	77.9	10.1	10.18	8.86	41.2
4.4	34.8	49.7	57	45.2	7.4	7.6	3.5	17.4	4.4	31.5	50.4	55	38	66.2	5.9	7.1	6.7		4.4	15.3	59.9	53	38	87.7	8.18	10.84	7.18	
4.3	35.2	51.3	58	44.5	5.0	7.9	7.9	24.4	4.3	40.9	50.3	56	39	62.2	5.7	5.8	7.7	21.3	4.3	36.2	51.5	54	37	79.0	9.52	7.78	10.82	22.75
4.4	28.9	49.7	55	51.5	7.7	4.8	5.9	10.3	4.4	24.4	49.1	53	36	71.6	3.3	2.9	3.6		4.4	5.4	59.5	51	36	90.6	9.2	6	3.54	
4.3	36.0	49.1	55	46.4	6.2	5.9	8.9	20.7	4.3	37.4	50.2	54	37	62.2	6.4	5.1	7.6	15.6	4.3	30.4	51.3	52	37	80.5	8.22	9.9	9.74	12.15
4.3	46.6	46.6	56	45.4	7.6	7.5	7.8	27.1	4.3	45.7	47.3	54	38	64.6	7.4	6.1	3.2	18.8	4.3	31.3	51.0	53	38	86.8	10.18	9.26	5.92	10.3
4.5	39.8	46.8	57	41.3	8.5	8.6	8.6	22.6	4.5	43.9	47.7	57	39	56.7	7.0	4.7	9.0	19.2	4.5	35.5	49.9	54	39	74.3	7.96	9.5	9.44	17
4.3	34.3	50.4	54	51.7	6.3	5.7	6.4	19.4	4.3	33.5	50.7	52	36	71.0	6.2	4.9	6.9	10.0	4.3	23.7	45.5	51	36	93.1	8.28	9.74	8.84	
4.5	40.1	48.3	52	43.3	8.5	8.8	8.9	27.4	4.5	49.0	47.6	52	35	56.8	6.8	9.4	5.6	29.4	4.5	46.7	49.8	50	35	74.6	9.48	11.12	9.06	32.1
4.3	37.3	51.3	56	42.0	8.2	8.1	3.2	28.3	4.3	43.4	50.8	54	38	63.1	6.7	6.1	2.3	22.0	4.3	32.8	49.5	53	38	84.4	9.96	9.4	6.5	12.21
4.3	48.1	44.5	57	40.9	7.6	8.0	8.3	27.8	4.3	47.4	47.7	53	38	58.6	5.1	7.3	9.0	20.0	4.3	37.1	50.4	53	38	74.9	8.22	9.7	9.12	18.9
4.3	32.1	47.1	55	44.6	4.5	8.1	7.9	16.7	4.3	32.9	46.4	53	35	67.2	1.8	5.8	4.6		4.3	7.9	72.4	50	35	86.8	6.04	9.1	9.64	10.1
4.3	39.9	49.9	52	43.8	7.2	7.3	7.6	36.0	4.3	53.9	50.6	50	33	60.1	8.2	8.3	5.6	36.7	4.3	54.6	50.0	48	33	75.8	11.62	10.5	7.52	43.05
4.5	31.6	51.0	57	51.0	6.7	4.6	6.6	14.1	4.5	27.5	50.7	53	38	72.6	4.8	4.5	3.7		4.5	8.5	61.1	53	38	93.6	7.64	7.98	3.18	
4.5	36.6	50.0	57	43.7	5.5	7.0	9.5	21.5	4.5	39.0	50.3	55	38	60.7	3.4	5.2	10.2	16.9	4.5	31.2	51.0	53	38	77.5	6.2	7.46	7.06	18.8
4.3	33.7	49.95	57	44.4	7.5	6.1	5.0	16.9	4.3	31.2	50.7	55	38	66.8	9.2	4.1	4.3		4.3	13.3	51.1	53	38	89.7	7.2	3.84	3.32	
4.3	39.8	50.2	57	41.3	8.1	7.5	7.9	27.7	4.3	46.8	49.5	55	38	57.0	7.2	7.4	6.4	26.1	4.3	42.8	51.6	53	38	74.0	9.4	9.12	7	31.85
4.5	41.5	50.8	52	43.1	7.7	9.2	5.1	29.0	4.5	46.5	49.7	50	34	64.4	3.8	8.2	3.8	23.0	4.5	34.4	50.7	49	34	85.8	7	10.2	5	18.15
4.3	43.3	46.6	57	42.2	10.2	6.2	8.5	25.8	4.3	46.3	48.3	55	38	58.8	9.1	4.0	8.1	24.1	4.3	41.0	50.4	53	37	76.3	9.98	8.88	9.12	26.2
4.4	35.4	49.1	57	47.8	4.8	6.7	8.3	20.3	4.4	35.6	47.3	55	38	68.2	4.0	4.3	7.0	4.2	4.4	15.2	50.1	53	38	90.4	8.52	3.6	8.88	
4.5	36.4	50.9	58	40.3	5.1	8.0	8.0	23.3	4.5	39.8	50.2	56	39	57.1	7.7	5.2	6.8	14.0	4.5	29.2	50.9	54	39	74.3	8.16	8.42	7.28	12.6
4.5	39.7	49.3	58	47.4	6.0	6.8	7.9	22.7	4.5	39.0	48.6	56	39	66.1	8.5	7.6	2.0	11.3	4.5	24.8	49.8	54	39	85.9	7	6.94	7.92	7.05
4.4	37.2	50.2	58	40.6	9.3	6.8	4.5	24.3	4.4	40.6	51.3	56	39	56.6	7.9	6.5	4.4	16.7	4.4	31.1	49.0	54	39	75.3	7.58	8.54	7.9	10.5
4.5	32.5	50.8	57	51.3	5.7	8.5	4.7	16.3	4.5	30.7	50.4	54	37	70.5	6.1	5.5	5.4	6.2	4.5	18.7	49.6	52	36	93.4	8.88	9.86	7.74	
4.5	40.4	51.5	56	40.6	8.9	9.6	4.2	28.6	4.5	46.8	50.0	54	39	58.3	7.1	8.2	4.6	25.8	4.5	41.2	50.2	54	39	74.8	8.94	8.88	7.9	27.45
4.4	36.2	50.0	57	41.2	7.7	7.1	4.1	19.3	4.4	33.8	50.1	55	38	58.2	6.6	6.8	4.0	5.4	4.4	18.5	51.9	53	38	76.3	9.28	9.74	3.88	1.85
4.3	36.1	50.4	58	40.3	9.4	6.1	4.8	23.6	4.3	39.6	51.4	56	39	56.6	7.7	7.2	4.0	17.3	4.3	31.9	50.8	54	38	72.1	8.24	7.78	7.04	18.2
4.5	32.4	47.7	57	47.7	6.6	4.7	7.8	14.7	4.5	29.3	46.6	54	37	67.2	7.8	5.6	1.4	3.6	4.5	14.0	49.7	52	36	89.8	9.34	3.94	7.6	
4.4	33.5	50.7	56	44.9	5.4	9.4	5.2	20.1	4.4	35.7	49.1	53	37	61.5	5.3	8.5	7.6	9.2	4.4	26.1	51.1	52	37	77.8	7.86	8.54	6.62	12.1
4.3	33.4	51.2	57	43.6	7.9	7.0	3.1	19.0	4.3	32.8	50.3	55	38	64.4	5.1	6.6	3.4	4.3	4.3	15.1	50.5	53	38	85.9	8.04	5.68	2.72	
4.3	39.5	46.3	58	43.2	7.7	5.2	8.0	22.6	4.3	39.1	46.7	56	39	62.6	5.6	5.9	6.4	16.4	4.3	29.9	51.2	54	39	77.8	9.06	5.9	9.84	17.9
4.4	25.3	50.7	55	53.9	5.9	6.3	6.8	13.9	4.4	28.4	50.2	52	35	74.8	7.8	7.6	4.8		4.4	15.9	49.4	50	34	96.1	7.74	8.12	7.68	
4.4	41.2	49.8	54	41.7	9.1	9.0	6.5	29.7	4.4	50.0	50.2	51	35	59.1	8.4	6.2	7.3	32.8	4.4	50.2	50.4	50	35	74.0	9.74	7.94	9.96	41.1
4.5	37.4	49.7	57	44.2	3.8	4.6	8.8	21.4	4.5	34.2	47.7	55	38	65.7	2.7	2.9	10.2		4.5	11.4	71.1	53	38	89.3	6.36	1.84	9.7	13.4
4.4	37.2	51.6	56	40.8	8.5	5.1	4.9	26.1	4.4	40.2	50.7	54	37	59.7	7.5	6.4	4.3	14.7	4.4	28.5	50.0	52	36	78.9	9.74	8.56	6.1	10.35
4.2	31.2	50.5	57	46.2	6.3	6.9	3.9	13.4	4.2	26.2	50.5	50	33	66.8	6.2	6.8	3.6		4.2	12.4	51.1	48	32	88.3	8.42	8.26	6.62	
4.4	43.5	48.5	56	40.9	7.6	6.4	6.9	29.9	4.4	46.4	48.3	55	37	58.4	8.4	9.1	4.1	18.1	4.4	35.2	49.3	52	37	73.4	9.66	9.3	5.5	19.2

						30-May Week-7										06-Jun Week-8				08-Jun				13-Jun Week-9				
Fder wt.	Total f.out	Feed In	Bird No_A	Bird Wt	F1	F2	F3	Bag	Fder wt.	Total f.out	Feed In	Bird No_A	Bird Wt	F1	F2	F3	Bag	Fder wt.	Total f.out	Feen in	Bird No_A	Bird Wt	F1	F2	F3	Bag	Fder wt.	Total f.out
4.4	34.7	51.1	12	41.5	8.4	8.1	7.0	40.4	4.4	59.5		12	50.2	8.9	10.6	8.9	10.7	4.4	34.8	38.45	10	47.4	8.2	8.9	6.4	33.9	4.4	53.0
4.4	35.3	50.1	12	36.6	10.8	9.8	7.6	44.5	4.4	68.2		12	42.5	11.7	9.6	9.6	25.5	4.4	51.9		10	39.5	7.8	6.9	6.5	21.7	4.4	38.5
4.5	38.8	47.6	12	45.0	9.1	8.9	6.9	43.2	4.5	63.7		12	53.1	9.9	9.8	10.1	18.2	4.5	43.5		10	50.3	6.1	5.4	5.3	12.9	4.5	25.3
4.4	25.3	51.4	12	35.8	10.0	9.7	7.5	36.3	4.4	59.0		12	40.1	11.3	11.1	8.7	16.0	4.4	42.7		10	36.7	6.7	9.2	6.8	10.4	4.4	28.7
4.4	27.0	49.9	11	39.1	11.1	11.0	6.8	33.8	4.4	58.3		10	42.8	12.4	12.0	7.9	13.0	4.4	40.9	48.8	8	40.1	12.4	11.6	7.6	48.6	4.4	75.7
4.5	25.4	50.3	12	36.5	10.8	9.5	8.9	34.7	4.5	59.4		12	41.9	10.9	11.0	9.4	17.2	4.5	43.9		10	39.3	8.0	8.2	6.5	12.0	4.5	30.2
4.4	15.7	50.2	12	45.5	11.5	7.6	5.8	22.7	4.4	43.3	16.5	12	53.5	11.3	10.2	8.1	11.6	4.4	36.8	49.9	10	50.0	10.3	7.9	6.4	47.5	4.4	67.8
4.4	64.0	53.0	12	36.9	9.1	9.5	8.8	23.4	4.4	46.4	29.7	12	43.3	10.5	10.2	9.7	33.1	4.4	59.1		10	40.8	6.1	6.1	6.5	30.6	4.4	44.8
4.5	29.8	49.7	12	41.1	10.6	10.5	6.3	39.0	4.5	61.8		11	47.8	11.3	11.9	8.0	19.4	4.5	46.1		9	45.4	8.7	8.3	7.2	12.5	4.5	32.2
4.3	41.4	49.9	12	34.6	9.2	9.7	7.7	49.8	4.3	72.1		12	41.1	10.5	10.3	9.7	27.4	4.3	53.6		10	39.4	7.6	7.4	7.2	19.8	4.3	37.6
4.5	22.3	49.7	12	44.2	9.9	7.4	7.4	30.1	4.5	50.4		12	52.3	11.1	9.4	8.1	5.1	4.5	29.2	48.65	10	49.6	6.8	7.4	7.7	42.4	4.5	59.9
4.4	65.9	49.8	12	36.5	11.2	10.7	6.4	26.7	4.4	50.6	33.3	12	42.3	11.6	11.6	8.9	40.7	4.4	68.4		9	36.0	8.6	8.3	6.6	36.3	4.4	55.4
4.4	21.9	51.0	12	41.5	8.0	8.9	9.1	31.2	4.4	52.9		12	49.7	9.9	10.1	8.8	8.4	4.4	32.9	49.1	10	47.8	9.1	9.4	6.1	44.8	4.4	65.0
4.3	46.6	49.7	12	36.2	7.7	9.9	10.2	7.3	4.3	30.9	49.65	12	42.9	9.3	10.3	10.7	38.1	4.3	64.0		10	40.9	8.8	7.8	6.4	31.3	4.3	50.0
4.4	14.4	49.7	12	44.0	10.7	7.7	5.6	22.9	4.4	42.5	17.45	12	52.2	11.1	9.1	7.4	14.8	4.4	38.1	49.4	10	49.3	11.0	6.5	6.3	49.2	4.4	68.6
4.3	35.7	49.7	12	37.4	10.2	9.3	7.2	44.7	4.3	67.0		11	38.4	10.5	10.6	9.9	23.1	4.3	49.9		9	34.2	7.0	5.7	5.2	23.0	4.3	36.6
4.3	31.4	50.6	12	42.9	8.6	8.0	6.8	39.9	4.3	59.0		12	52.0	10.4	10.5	9.4	11.9	4.3	37.8	36.95	10	51.1	7.6	6.0	7.8	38.4	4.3	55.5
4.5	39.4	51.4	12	35.9	9.1	9.9	8.8	47.8	4.5	71.1		12	42.1	10.4	11.3	9.9	26.2	4.5	53.2		10	39.5	8.7	7.7	7.1	19.1	4.5	38.1
4.3	22.6	49.7	12	45.9	8.4	9.3	7.9	30.4	4.3	51.7		12	54.2	10.5	9.9	9.6	5.9	4.3	31.6	50.05	10	51.7	7.7	8.8	6.3	46.2	4.3	64.7
4.5	57.3	50.4	11	34.8	10.1	9.2	8.8	17.3	4.5	40.8	50.4	12	41.3	10.3	10.9	9.9	47.9	4.5	74.4		10	39.8	5.6	7.2	8.3	42.7	4.5	59.3
4.3	33.8	51.1	12	40.2	8.9	9.5	7.8	43.9	4.3	65.8		11	44.4	11.2	10.9	9.6	21.0	4.3	48.3		8	38.1	7.7	7.7	6.2	17.4	4.3	34.7
4.3	41.6	51.9	12	33.9	8.7	10.6	8.3	51.8	4.3	75.1		12	39.8	10.7	11.1	10.3	30.1	4.3	57.8		10	37.3	6.2	7.5	4.2	30.0	4.3	43.5
4.3	30.6	50.8	12	39.4	6.7	7.7	10.0	39.8	4.3	59.9		11	47.8	9.2	9.4	10.2	14.2	4.3	38.7	45.35	9	45.6	6.9	7.8	7.9	47.6	4.3	66.0
4.3	68.4	51.7	12	35.6	12.2	11.7	6.6	26.4	4.3	52.6	17.5	12	41.8	12.0	12.9	6.9	26.6	4.3	54.1		10	40.1	10.3	10.2	4.0	20.3	4.3	40.6
4.5	14.3	50.0	12	44.9	6.8	10.9	6.2	22.1	4.5	41.5	16.7	12	52.2	8.9	10.4	9.4	11.6	4.5	35.8	50.2	10	48.6	6.4	8.1	7.4	50.0	4.5	67.4
4.5	35.0	50.9	12	35.2	9.9	12.3	7.9	42.3	4.5	67.8		12	40.9	12.0	11.5	7.8	23.4	4.5	50.1		10	39.3	9.1	10.7	4.3	14.4	4.5	34.0
4.3	10.1	51.0	12	42.6	10.3	8.1	7.2	17.9	4.3	39.2	27.3	12	51.3	11.0	8.6	9.1	20.5	4.3	44.9	48.8	10	49.3	8.3	8.9	5.6	56.5	4.3	75.0
4.3	53.1	51.4	12	35.3	10.8	10.7	9.6	10.8	4.3	37.7	51.4	12	41.4	11.7	11.9	9.4	44.5	4.3	73.2		10	39.1	7.8	8.6	7.9	39.9	4.3	59.9
4.5	35.9	48.9	12	43.7	10.5	10.3	6.5	39.5	4.5	62.3		12	52.3	10.8	11.5	7.6	14.9	4.5	40.3	48.8	10	50.7	8.8	9.1	3.6	53.0	4.5	69.9
4.3	49.9	52.3	12	35.6	12.3	9.5	9.2	6.1	4.3	32.8	52.3	12	42.1	12.2	10.9	10.3	39.1	4.3	68.2		10	39.5	9.0	6.0	4.3	39.0	4.3	53.9
4.4	16.7	50.6	12	42.0	8.5	10.2	9.6	23.3	4.4	47.2		12	49.5	9.3	10.7	9.9	3.1	4.4	28.6	46.7	10	46.7	7.1	6.5	9.3	41.9	4.4	60.4
4.5	32.0	49.4	12	36.1	10.3	11.4	7.8	38.0	4.5	62.9		12	42.0	11.3	12.3	8.7	16.5	4.5	44.3	49.7	10	40.7	10.1	8.9	4.6	57.8	4.5	76.9
4.5	24.4	49.4	12	42.6	9.5	9.3	10.0	27.9	4.5	52.2		12	49.9	10.8	10.6	10.3	5.6	4.5	32.8	40.6	10	46.8	6.7	7.4	7.8	40.6	4.5	57.9
4.4	30.2	49.0	12	34.5	9.8	10.3	10.2	35.6	4.4	61.5		11	37.3	11.7	11.2	10.0	15.0	4.4	43.5	48.9	10	38.9	8.4	10.6	7.0	54.3	4.4	76.0
4.5	22.0	50.5	12	42.3	11.5	9.4	9.6	28.7	4.5	54.7		10	44.9	10.8	11.2	9.7	10.3	4.5	37.5	49.4	8	42.1	10.9	11.5	5.8	49.2	4.5	72.9
4.5	48.7	51.4	12	33.9	10.9	11.2	8.0	7.7	4.5	33.3	51.35	12	40.2	12.2	12.0	8.3	40.4	4.5	68.5		10	37.9	8.8	10.4	6.0	33.9	4.5	54.6
4.4	20.4	50.9	13	37.6	10.3	11.3	6.1	26.9	4.4	50.2		12	46.3	12.1	11.8	7.9	2.2	4.4	29.7	49.35	10	44.9	7.9	7.3	6.0	45.0	4.4	61.7
4.3	37.0	49.1	12	35.0	9.4	11.3	8.1	43.4	4.3	67.9		12	41.7	11.7	12.8	6.5	22.3	4.3	49.0	39.65	10	39.8	7.8	10.1	7.1	49.5	4.3	70.2
4.5	16.4	49.3	12	43.3	10.2	9.2	9.4	21.5	4.5	45.8	23.3	12	52.4	11.4	9.8	9.6	23.3	4.5	49.6	44.1	10	50.9	9.5	7.7	7.7	56.1	4.5	76.5
4.4	30.7	50.8	11	35.4	10.9	11.5	4.4	38.6	4.4	61.1		13	45.2	11.7	12.8	6.5	12.6	4.4	39.2	50.8	11	43.5	9.9	9.8	5.1	50.7	4.4	71.0
4.3	12.1	51.0	12	39.3	9.8	11.4	5.1	19.9	4.3	42.0	12.3	12	47.1	10.8	10.9	8.5	7.6	4.3	33.5	47.9	10	44.7	9.3	8.7	7.2	43.6	4.3	64.5
4.3	38.4	50.8	12	35.7	10.4	10.1	10.3	45.5	4.3	71.9		12	41.8	11.3	11.2	10.9	26.6	4.3	55.7		10	38.9	6.2	7.1	6.4	26.5	4.3	42.0
4.4	19.1	49.7	12	40.5	9.7	10.0	9.8	24.7	4.4	49.7		10	42.7	11.4	11.6	10.3	3.9	4.4	32.8	49.6	8	38.8	7.9	6.6	10.0	49.5	4.4	69.7
4.4	64.4	49.1	10	33.8	11.2	11.0	9.1	22.1	4.4	49.0	36.8	12	39.7	12.7	12.1	9.7	40.3	4.4	70.4		10	39.1	10.0	9.6	7.7	34.2	4.4	57.1
4.5	26.9	53.7	12	41.0	9.2	8.1	9.7	35.8	4.5	58.4		12	48.4	9.7	8.1	10.7	12.4	4.5	36.5	41.25	10	47.6	8.3	5.5	7.8	41.2	4.5	58.3
4.4	30.4	49.0	12	34.6	12.5	11.3	7.5	35.5	4.4	62.5		12	40.6	13.0	11.7	8.3	16.2	4.4	44.8	48.8	10	37.4	10.5	8.4	7.1	56.1	4.4	77.8
4.2	19.1	49.1	12	33.5	10.7	9.9	9.8	25.0	4.2	51.2		9	35.6	12.3	9.7	11.4	6.9	4.2	36.1	48.95	6	29.5	9.5	9.6	10.1	48.7	4.2	73.7
4.4	39.3	49.8	12	34.7	10.7	11.1	7.0	44.9	4.4	69.3		12	41.2	11.4	11.0	8.7	22.9	4.4	49.6	41.95	10	40.1	9.1	8.7	6.3	54.9	4.4	74.5

20-Jun Week-10								22-Jun	27-Jun Week-11								28-Jun	01-Jul	04-July Week-12							
Bird No_A	**Bird Wt**	**F1**	**F2**	**F3**	**Bag**	**Fder wt.**	**Total f.out**	**Feed In**	**Bird No_A**	**Bird Wt**	**F1**	**F2**	**F3**	**Bag**	**Fder wt.**	**Total f.out**	**Feed In**	**Feed In**	**Bird No_A**	**Bird Wt**	**F1**	**F2**	**F3**	**Bag**	**Fder wt.**	**Total f.out**
10	53.1	11.1	10.9	10.0	4.8	4.4	32.4		8	45.4	8.7	8.1	4.2		4.4	16.6	15	10.8	8	49.2	10.5	9.4	9.6		4.4	25.1
10	43.6	10.4	10.8	7.7		4.4	24.4	10.3	8	37.3	10.2	8.9	8.5		4.4	23.3	15		8	40.1	10.8	10.8	9.1		4.4	26.2
10	55.3	4.5	3.3	4.6		4.5	7.9	20.5	8	46.6	5.7	7.1	7.3		4.5	15.7	15		6	36.5	8.3	8.0	7.6		4.5	19.4
10	40.1	7.7	8.8	2.3		4.4	14.5	10.8	8	35.4	7.5	6.4	4.1		4.4	13.7	15		8	37.9	8.5	9.0	3.9		4.4	17.0
8	45.5	12.7	13.2	10.7	29.2	4.4	61.4		6	37.9	12.6	12.4	9.3	20.2	4.4	50.1			6	41.0	10.7	9.7	7.5	16.2	4.4	39.8
10	42.8	7.8	9.4	3.9		4.5	16.6	10.8	8	37.1	9.3	9.3	2.3		4.5	16.4	15		8	39.9	9.4	9.2	4.6		4.5	18.7
10	53.5	13.0	12.0	9.3	19.8	4.4	49.7		8	47.3	12.0	10.5	7.5	6.95	4.4	32.5			8	51.0	8.8	8.0	4.9		4.4	17.3
10	45.2	11.2	10.8	8.1	3.25	4.4	29.0		8	38.8	9.5	8.8	3.0		4.4	16.9	15		8	41.5	10.0	8.8	5.7		4.4	20.1
8	45.1	8.8	9.6	3.9		4.5	17.8	11.0	6	37.2	10.3	8.6	3.7		4.5	18.1	15		6	38.2	10.0	11.2	7.7		4.5	24.4
10	43.7	10.5	9.7	5.3		4.3	21.2		8	37.1	6.9	4.1	1.7		4.3	8.5	15	11.5	6	39.9	9.1	10.8	6.1		4.3	21.8
10	54.0	10.1	11.9	9.5	14.65	4.5	41.8		8	47.3	10.3	11.2	8.8	1.05	4.5	26.9		4.55	8	48.8	7.2	8.7	5.7		4.5	17.1
9	39.9	12.5	11.3	9.7	13.2	4.4	42.3		7	33.5	12.4	11.2	10.1	2.65	4.4	31.9			7	36.6	9.1	8.4	4.7	2.7	4.4	20.5
10	52.7	11.1	11.6	10.2	19.6	4.4	48.2		7	39.6	10.3	11.7	10.2	9.1	4.4	37.0			7	42.9	8.8	9.3	7.7	4.2	4.4	25.6
10	44.4	11.5	11.0	10.7	8.05	4.3	37.0		8	39.2	8.1	11.4	9.8		4.3	25.0		10.55	7	35.9	8.3	11.1	9.4		4.3	24.5
10	55.0	12.3	9.8	9.0	21.4	4.4	48.2		8	49.0	9.2	8.7	9.0	8	4.4	30.5			7	45.1	9.9	5.4	4.2		4.4	15.1
9	36.9	10.2	10.0	7.8		4.3	23.6		7	31.8	5.8	7.7	4.0		4.3	13.2	15		6	28.0	9.4	9.4	5.1		4.3	19.6
10	55.2	10.6	10.5	10.8	9.85	4.3	37.5		8	48.7	10.5	7.7	8.5		4.3	22.4	15		8	48.5	9.9	9.0	8.0	4.1	4.3	26.7
10	43.8	7.5	9.5	9.2		4.5	21.7	10.6	8	38.0	7.7	9.5	6.7		4.5	19.5	15		8	39.4	9.2	9.8	7.1	2.3	4.5	23.9
10	54.9	10.5	10.8	9.4	22.35	4.3	48.7		7	43.0	9.4	11.3	10.7	10.4	4.3	37.4			6	38.0	8.4	9.9	9.6	3.9	4.3	27.6
10	43.7	11.7	11.5	10.4	14.85	4.5	44.0		8	37.6	11.3	11.0	10.5	3.9	4.5	32.2			8	40.0	7.5	7.5	6.1	3.9	4.5	20.5
8	43.5	10.1	10.0	6.0		4.3	21.7		6	33.7	8.2	6.8	2.8		4.3	13.5	15		6	35.3	10.5	7.7	6.5		4.3	20.4
10	41.4	11.0	11.5	10.1		4.3	28.3		8	35.1	7.5	9.0	4.9		4.3	17.1	15		8	37.3	9.3	10.2	5.9		4.3	21.2
9	51.1	10.0	9.5	10.7	21.6	4.3	47.5		7	42.3	10.5	9.4	11.4	7.55	4.3	34.6			6	39.5	8.5	8.2	8.6		4.3	21.0
10	44.1	11.3	11.3	8.8		4.3	27.2		8	38.8	9.5	8.8	2.1		4.3	16.2	15		8	40.9	10.7	10.6	4.6		4.3	21.7
9	49.3	10.0	10.6	9.9	23.75	4.5	49.8		6	36.2	10.3	11.2	10.3	8.9	4.5	36.2			6	38.1	9.3	11.1	7.4	1.7	4.5	24.9
10	43.9	7.5	10.8	3.4		4.5	17.3	10.8	8	37.9	7.8	8.2	3.7		4.5	15.1	15		8	40.7	7.8	7.7	5.4		4.5	16.4
10	55.1	12.1	11.1	7.5	29.25	4.3	55.7		8	46.2	12.3	9.7	8.2	15.3	4.3	41.2			8	49.5	10.2	8.5	5.1	6.3	4.3	25.8
10	42.7	12.0	12.7	11.0	15.15	4.3	46.6		8	36.5	9.9	12.9	10.2	8.8	4.3	37.5			8	39.2	9.8	11.5	10.2		4.3	27.2
10	57.9	10.7	12.0	7.5	23.15	4.5	48.9		8	50.2	9.2	11.3	6.6	10.4	4.5	33.0			7	47.7	4.9	11.7	5.8		4.5	18.0
10	43.5	11.4	11.7	11.5	8.95	4.3	39.2		8	36.8	11.9	11.8	9.9		4.3	29.3			8	39.1	10.0	7.5	5.8		4.3	19.0
10	53.6	7.1	9.4	7.2	24.5	4.4	43.9		8	46.1	10.0	9.9	10.8	5.2	4.4	31.6			8	48.8	9.3	8.8	6.0		4.4	19.8
10	45.0	10.5	9.9	9.0	34.9	4.5	59.8		8	38.4	13.1	13.1	6.3	19.6	4.5	47.5			8	40.0	11.7	10.8	6.2	12.3	4.5	36.5
10	51.7	7.4	11.4	9.3	18.75	4.5	42.3		8	45.0	9.7	10.7	10.5	3.7	4.5	30.0			7	40.0	8.7	9.0	7.0		4.5	20.2
9	39.3	10.9	11.6	8.6	34.05	4.4	60.8		7	33.5	12.4	11.8	8.2	21.2	4.4	49.3			7	35.3	10.2	10.1	8.4	14.3	4.4	38.6
7	41.2	10.3	11.4	9.3	34.05	4.5	60.5		5	32.5	12.7	13.2	8.8	22	4.5	52.2			5	34.7	10.3	10.8	8.4	17.9	4.5	42.9
10	42.0	9.3	10.9	8.5	16.65	4.5	40.8		8	37.0	10.9	11.3	10.2	2.2	4.5	30.1			8	40.1	8.3	9.2	5.6		4.5	18.5
10	48.7	9.6	10.3	9.6	20.2	4.4	45.3		8	42.0	11.3	11.2	9.2	4.9	4.4	32.2			8	45.7	10.0	8.6	4.7		4.4	19.0
10	43.8	9.9	9.7	9.1	42.2	4.3	66.6		8	38.2	10.8	11.4	7.5	27.8	4.3	53.3			8	41.6	11.1	10.7	4.9	16.4	4.3	38.7
10	56.6	9.6	8.1	8.2	37.7	4.5	59.2		7	41.9	10.7	11.2	9.3	21.1	4.5	47.8			6	39.8	9.9	9.8	9.2	12.0	4.5	36.4
11	47.3	10.7	10.9	8.8	26.45	4.4	52.5		9	41.6	10.0	10.5	7.5	14.3	4.4	37.9			8	38.8	10.9	9.1	6.9	2.4	4.4	25.0
10	50.2	9.8	8.3	8.2	24.75	4.3	46.8		8	43.9	10.5	10.3	8.5	7.55	4.3	32.5			8	47.5	9.1	8.3	5.0		4.3	18.1
10	42.4	9.0	9.6	8.1	5.95	4.3	28.4		8	36.0	9.0	9.3	4.5		4.3	18.5	15		8	38.3	9.6	10.7	6.9		4.3	22.9
8	41.5	10.7	9.8	10.2	30.95	4.4	57.2		5	26.7	10.6	12.1	12.7	18.2	4.4	49.1			5	28.5	10.4	10.8	12.1	12.9	4.4	41.8
10	43.4	11.9	11.3	8.6	15.4	4.4	42.9		8	38.0	13.1	12.9	9.1	0.8	4.4	31.5			8	41.0	10.1	11.5	3.3		4.4	20.6
9	47.9	7.7	10.4	6.6	19.9	4.5	40.2		7	38.5	10.5	11.0	9.6	2.9	4.5	29.6			7	41.4	7.5	7.7	5.4		4.5	16.1
9	39.9	10.7	8.4	8.1	39.45	4.4	62.3		8	33.1	12.1	11.6	9.6	21.4	4.4	50.4			7	33.8	13.3	9.0	10.1	12.1	4.4	40.1
6	32.9	9.7	9.0	9.3	38.85	4.2	62.6		4	23.4	11.6	11.3	11.2	25.7	4.2	55.5			4	25.2	11.3	10.2	11.0	20.7	4.2	49.0
10	43.1	10.1	8.9	5.5	37.4	4.4	57.6		8	36.2	11.2	10.1	9.7	18.1	4.4	44.8			8	39.9	10.2	9.1	7.6	7.2	4.4	29.7

Pen	Trt	Strain	Sex	W0	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
1	2	R 7	M	41	155	406	811	1376	2000	2636	3462	4187	4736	5306	5673	6155	120	412	543	905	1286	1559	2188	2058	2026	2051
2	3	C	F	43	156	416	852	1367	1878	2400	3053	3543	3950	4358	4658	5010	133	339	598	859	1018	1155	1431	1361	1342	1405
3	2	C	M	42	159	448	941	1536	2159	2771	3747	4427	5026	5534	5823	6087	127	332	632	942	1195	1306	1898	1678	1824	1742
4	1	R 3	F	40	183	476	901	1426	1985	2505	2983	3340	3666	4014	4425	4733	148	330	594	887	1099	1320	1470	1363	1401	1415
5	3	H	M	42	156	407	849	1331	1973	2701	3553	4276	5008	5685	6323	6830	155	345	594	873	1152	1335	1546	1661	1748	1786
6	1	C	F	44	173	477	894	1453	2036	2526	3038	3490	3930	4284	4635	4993	130	356	624	891	1051	1213	1350	1296	1366	1357
7	1	R 3	M	41	174	488	975	1566	2226	2991	3795	4460	5000	5350	5908	6373	153	351	642	1012	1301	1600	1878	1915	1893	1804
8	2	H	F	40	168	428	817	1322	1894	2403	3073	3608	4084	4524	4855	5190	140	337	521	747	1003	1152	1463	1416	1430	1587
9	1	H	M	41	178	511	974	1573	2259	2956	3423	4347	5042	5638	6203	6367	147	355	654	977	1216	1377	1464	1364	1551	1694
10	2	R 7	F	40	166	433	813	1321	1848	2325	2887	3428	3938	4366	4640	4943	91	379	542	807	1051	1196	1597	1540	1598	1643
11	1	R 7	M	39	174	486	941	1523	2193	2836	3680	4362	4958	5402	5915	6103	148	351	633	964	1244	1436	1796	1766	1798	1811
12	1	H	F	41	181	464	884	1396	1899	2436	3042	3527	4000	4431	4791	5231	130	322	540	763	955	1076	1282	1289	1365	1462
13	3	C	M	43	151	419	856	1412	2069	2739	3457	4138	4782	5268	5651	6131	130	342	592	920	1210	1443	1663	1667	1698	1678
14	1	C	F	42	173	467	906	1391	1945	2468	3013	3578	4094	4444	4895	5134	127	340	591	785	982	1112	1309	1380	1391	1301
15	1	R 7	M	41	185	521	1039	1609	2237	2831	3663	4353	4934	5502	6130	6446	141	380	668	977	1283	1442	1796	1827	1885	2045
16	1	R 3	F	41	181	482	878	1449	1943	2514	3118	3495	3804	4102	4537	4663	137	344	588	851	1069	1275	1537	1488	1472	1441
17	2	R 7	M	40	161	431	848	1419	2018	2713	3578	4333	5108	5516	6093	6065	129	343	575	848	1142	1377	1911	1764	1927	1800
18	2	R 7	F	40	169	436	821	1292	1772	2321	2995	3510	3950	4382	4748	4928	138	337	535	748	1002	1209	1644	1490	1507	1640
19	1	C	M	44	169	483	999	1616	2218	2911	3828	4513	5168	5490	6149	6333	123	349	639	938	1164	1331	1713	1676	1691	1601
20	2	H	F	42	164	425	803	1353	1776	2332	2900	3443	3984	4374	4703	4995	139	360	528	743	978	1154	1372	1465	1505	1533
21	3	H	M	41	156	405	783	1311	1972	2637	3347	4035	4758	5433	5623	5883	205	309	535	807	1138	1310	1592	1522	1599	1618
22	2	R 3	F	41	161	411	775	1279	1833	2340	2823	3317	3732	4144	4390	4658	130	308	515	792	1074	1238	1537	1446	1430	1515
23	2	R 3	M	42	169	434	825	1393	2101	2713	3578	4344	5062	5682	6040	6580	135	318	576	842	1347	1460	1793	1837	2014	2051
24	1	H	F	41	176	483	872	1368	1877	2370	2963	3487	4014	4410	4845	5118	127	333	558	672	999	1128	1317	1334	1358	1338
25	1	R 3	M	42	185	494	943	1594	2269	2926	3743	4353	4862	5480	6027	6350	145	355	633	967	1289	1494	1903	1863	1860	1858
26	1	R 7	F	41	171	456	871	1366	1897	2421	2935	3407	3926	4386	4743	5090	142	331	577	835	1056	1275	1508	1470	1615	1670
27	3	R 3	M	42	160	405	819	1389	2088	2802	3547	4272	4934	5506	5770	6185	155	351	574	913	1247	1465	1819	1803	1874	1922
28	3	H	F	41	166	421	807	1291	1781	2311	2943	3450	3906	4274	4563	4903	144	333	517	757	973	1115	1289	1318	1335	1333
29	3	R 7	M	40	151	386	754	1346	2011	2681	3643	4360	5066	5786	6278	6817	152	338	525	872	1236	1490	1872	1835	1918	2100
30	2	C	F	43	161	431	840	1320	1838	2384	2963	3508	3950	4350	4600	4893	127	334	552	765	975	1138	1428	1405	1428	1472
31	2	H	M	41	166	429	881	1493	2133	2824	3503	4128	4668	5356	5758	6100	137	380	577	857	1231	1316	1668	1546	1490	1651
32	3	R 3	F	42	163	399	768	1260	1786	2321	3007	3498	4074	4502	4795	5003	159	325	552	818	1085	1267	1538	1552	1707	1708
33	2	C	M	44	157	436	916	1480	2064	2683	3547	4157	4680	5174	5628	5709	125	340	607	861	1121	1320	1800	1617	1545	1558
34	3	R 7	F	40	159	413	793	1270	1770	2353	2875	3387	3888	4362	4789	5049	156	338	528	806	1084	1313	1473	1565	1723	1605
35	1	H	M	41	180	483	969	1602	2203	2919	3525	4486	5260	5883	6492	6948	147	344	620	923	1144	1305	1482	1555	1759	1648
36	3	C	F	42	149	372	779	1269	1822	2338	2823	3352	3786	4202	4625	5015	141	325	538	805	1029	1124	1283	1348	1384	1379
37	3	R 3	M	41	147	370	773	1288	1819	2384	3137	3855	4490	4868	5248	5710	171	317	553	910	1189	1351	1755	1642	1736	1643
38	3	R 7	F	41	151	396	748	1260	1768	2252	2917	3478	3978	4384	4773	5198	187	339	514	809	1055	1218	1514	1574	1848	357
39	2	H	M	42	169	446	890	1490	2100	2805	3610	4365	5090	5664	5981	6637	140	362	578	882	1137	1329	1660	1628	1723	1728
40	1	R 7	F	40	178	484	906	1403	1923	2433	2947	3480	3955	4304	4622	4850	175	340	589	865	1097	1291	1699	1823	1725	1687
41	3	R 7	M	40	146	384	818	1363	2012	2684	3277	3928	4474	5016	5490	5933	174	371	556	909	1236	1444	1763	1732	1695	1766
42	2	C	F	43	159	436	849	1349	1958	2431	2975	3480	3890	4240	4498	4783	129	327	563	803	997	1125	1435	1354	1372	1353
43	1	C	M	43	178	515	1059	1685	2338	3004	3685	4266	4845	5193	5332	5696	138	373	710	841	1195	1377	1589	1542	1588	1559
44	3	H	F	41	158	407	804	1302	1848	2311	2818	3312	3906	4342	4750	5120	144	328	546	759	970	1066	1282	1399	1336	1419
45	2	R 3	M	41	168	434	836	1383	2053	2791	3413	4037	4756	5322	5500	5911	133	316	587	918	1283	1501	1845	1830	1937	1914
46	3	R 3	F	40	154	393	808	1276	1866	2464	2887	3380	3744	4438	4135	4826	165	334	553	869	1154	1355	1408	1471	1581	1635
47	3	C	M	44	146	403	853	1444	2088	2761	3346	3956	4910	5490	5860	6300	151	348	638	972	1226	1409	1409	1442	1749	1845
48	2	R 3	F	41	156	389	786	1278	1824	2294	2892	3432	4010	4314	4520	4988	134	324	579	814	1091	1256	1649	1648	1698	1697

F11	F12	Mortality	dW1	dW2	dW3	dW4	dW5	dW6	dW7	dW8	dW9	dW10	dW11	dW12	FCE1	FCE2	FCE3	FCE4	FCE5	FCE6	FCE7	FCE8	FCE9	FCE10	FCE11	FCE12
1985	2155	2	114	251	405	566	624	636	826	725	549	570	367	483	948	608	746	625	485	408	377	352	271	278	185	224
1435	1503	1	113	259	436	515	511	522	653	490	407	408	300	353	849	765	730	599	502	452	457	360	303	290	209	235
1584	1614	6	117	289	493	595	623	613	975	680	599	508	288	264	918	872	780	632	521	469	514	405	329	292	182	164
1446	1458	1	142	293	425	525	559	520	478	357	326	348	411	308	960	889	716	592	509	394	325	262	233	246	284	211
1875	1722	6	114	251	443	482	642	728	851	723	732	678	638	507	736	729	744	552	557	545	551	435	419	379	340	294
1375	1593	0	129	304	417	559	583	491	512	452	440	354	351	358	993	854	668	627	555	404	379	349	322	261	255	224
2154	1894	6	133	314	488	591	660	764	804	665	540	350	558	465	868	894	759	584	507	478	428	347	285	194	259	246
1506	1473	6	127	261	389	505	572	509	670	535	476	440	331	335	906	774	746	676	570	442	458	378	333	277	220	228
1765	1460	6	136	333	463	599	686	697	468	924	695	595	566	163	927	939	708	613	564	506	319	677	448	351	321	112
1590	1886	1	126	267	379	509	527	477	562	542	510	428	274	303	1387	704	701	630	501	399	352	352	319	260	172	161
1863	1783	2	135	312	455	581	670	644	844	682	596	444	513	188	914	889	719	603	539	448	470	386	332	245	275	105
1476	1631	5	140	283	421	512	503	537	606	485	473	431	360	440	1078	880	779	671	526	499	473	376	347	295	244	270
1501	1621	2	108	268	438	556	657	671	717	682	644	486	383	480	829	781	739	604	543	465	431	409	379	290	255	296
1499	1479	3	130	294	439	486	554	523	546	565	516	350	451	239	1024	865	742	619	564	470	417	409	371	269	301	162
2208	2051	4	144	336	518	570	628	594	833	690	581	568	628	316	1023	882	776	583	489	412	464	378	308	278	284	154
1494	1326	4	140	301	396	571	494	571	604	376	310	298	435	126	1015	875	673	670	462	448	393	253	210	207	291	95
1886	1341	1	121	270	417	572	598	695	866	755	775	408	577	-28	932	787	725	674	524	505	453	428	402	227	306	-21
1608	1320	0	129	268	384	471	480	549	674	515	440	432	366	180	932	794	718	630	479	454	410	346	292	263	227	136
1507	1520	6	125	314	516	617	602	693	918	685	655	322	659	185	1017	900	807	658	517	521	536	409	387	201	437	122
1475	1463	4	122	261	378	550	423	556	568	543	541	390	328	293	879	726	717	740	433	481	414	371	359	254	223	200
1367	1350	2	115	249	378	529	661	665	710	688	723	675	191	260	561	805	706	655	580	508	446	452	452	417	140	193
1395	1373	2	121	249	364	504	554	508	483	493	415	412	246	268	930	811	707	636	516	410	315	341	290	272	176	195
1844	2094	5	127	266	391	568	708	612	866	765	719	620	358	540	938	834	678	674	526	419	483	417	357	302	194	258
1375	1190	4	134	307	389	496	509	493	593	523	527	396	435	273	1053	921	697	739	509	437	451	392	388	296	316	229
2082	1885	3	143	309	449	651	675	657	818	610	509	618	547	323	988	871	710	673	524	440	430	328	273	333	263	172
1611	1713	1	131	285	414	496	531	524	514	472	519	460	357	348	917	861	718	594	503	411	341	321	322	275	221	203
1821	1919	1	118	245	414	569	699	714	745	725	662	572	264	415	761	699	722	623	561	488	409	402	353	298	145	216
1128	1294	1	124	255	386	484	489	531	632	507	456	368	289	340	861	766	746	640	503	476	490	385	342	276	256	263
1998	1991	6	110	236	368	592	666	669	963	717	706	720	492	540	728	696	701	678	539	449	514	391	368	343	246	271
1239	1285	2	118	269	409	480	518	546	579	545	442	400	250	293	931	807	742	628	532	480	406	388	309	272	202	228
1540	1480	1	125	263	451	612	640	691	680	625	540	688	402	343	916	692	782	714	520	525	408	404	362	417	261	231
1539	1379	0	122	236	369	492	526	535	686	492	576	428	293	208	764	726	668	601	484	422	446	317	337	251	190	150
1539	1309	1	113	279	479	564	584	619	864	610	523	494	454	81	903	822	790	655	521	469	480	377	339	317	295	62
1641	1527	1	119	253	380	478	500	583	523	512	501	474	426	260	762	749	720	592	461	444	355	327	291	295	260	170
1670	1858	6	139	303	486	633	601	716	606	961	774	623	609	456	944	882	784	685	525	549	409	618	440	378	365	245
1341	1445	0	107	223	408	489	553	516	485	528	434	416	423	390	761	687	757	608	537	459	378	392	314	302	315	270
1639	1649	1	106	223	403	515	531	564	753	718	635	378	380	463	618	703	729	566	447	418	429	437	366	230	232	281
1660	1828	1	110	244	352	513	508	484	665	562	500	406	389	425	590	720	685	634	482	397	439	357	270	1137	234	233
1516	1749	5	128	276	444	600	610	705	805	755	725	574	317	655	910	762	768	680	536	531	485	464	421	332	209	375
1623	1515	3	137	306	423	497	520	509	514	533	475	349	319	228	782	901	717	574	474	395	303	293	275	207	196	150
1783	1804	1	105	238	434	545	649	672	593	652	546	542	474	443	604	642	782	599	525	465	336	376	322	307	266	245
1239	1325	0	116	278	413	500	608	473	544	505	410	350	258	285	897	850	733	623	610	421	379	373	299	259	208	215
1473	1460	8	134	338	544	626	653	666	682	581	579	348	140	364	977	905	766	744	546	484	429	377	365	223	95	249
1421	1369	4	116	249	397	498	546	463	507	493	594	436	408	370	804	761	727	657	563	434	396	353	445	307	287	270
1511	1920	2	126	266	402	547	670	738	623	623	719	566	178	411	952	843	685	595	522	492	338	341	371	296	118	214
1583	1367	4	115	238	416	468	589	599	422	493	364	694	-303	178	695	714	751	539	511	442	300	335	230	424	-191	130
1773	1633	11	102	258	450	591	644	673	585	610	954	580	370	440	678	740	705	608	525	477	415	423	546	314	209	270
1598	1880	2	115	233	397	492	546	470	598	540	578	304	206	468	859	720	685	604	500	374	363	328	341	179	129	249
								595												457						

Age	Pen	Code	Trt	Strain	Sex	Weight	Feather	Breast	Br. Skin	Br. Bone	Thighs	Drums	Wings	Liver	Gut	Remain	feathers
1				R 3	M	43	43	0.3		0.5	3.4	3.9	1.7	1.4	1.9	29.7	
1				R 3	M	49	49	0.3		0.4	5.1	3.5	2.1	1.9	2.4	31.3	
1				R 3	M	43	43	0.5		0.5	3.8	3.3	2.4	1.8	2.0	28.0	
1				R 3	M	47	47	0.3		0.6	4.4	3.7	1.8	1.7	3.1	30.1	
1				R 3	M	38	38	0.1		0.3	3.4	2.9	1.8	1.9	1.9	25.0	
1				R 3	M	34	34	0.3		0.4	3.3	2.7	1.6	1.6	2.0	21.9	
1				R 3	F	28	28	0.2		0.4	2.1	2.0	1.2	1.1	1.6	17.9	
1				R 3	F	45	45	0.2		0.5	4.1	3.9	2.3	1.6	2.1	29.3	
1				R 3	F	48	48	0.6		0.7	3.5	3.8	2.3	1.8	3.1	31.3	
1				R 3	F	41	41	0.5		0.6	3.3	3.4	2.1	1.5	1.7	26.7	
1				R 3	F	39	39	0.2		0.4	3.0	2.7	2.0	1.5	2.2	25.9	
1				R 3	F	41	41	0.6		0.6	3.2	3.4	2.0	1.6	2.4	26.7	
1				R 7	M	41	41	0.6		0.4	3.4	3.5	1.9	1.8	1.9	26.0	
1				R 7	M	43	43	0.7		0.6	4.1	3.5	2.0	1.4	1.7	27.3	
1				R 7	M	40	40	0.3		0.4	3.9	2.6	1.7	1.6	1.8	26.7	
1				R 7	M	39	39	0.4		0.4	3.5	3.1	1.9	1.6	2.0	24.9	
1				R 7	M	35	35	0.2		0.4	3.0	2.9	1.7	1.1	1.7	23.2	
1				R 7	M	39	39	0.6		0.4	3.4	3.7	2.2	1.9	2.1	23.9	
1				R 7	F	43	43	0.6		0.6	3.6	3.8	2.3	1.3	1.8	28.5	
1				R 7	F	36	36	0.2		0.4	2.7	2.7	1.8	1.2	1.9	23.7	
1				R 7	F	32	32	0.4		0.5	3.0	3.0	1.8	1.4	1.8	19.7	
1				R 7	F	38	38	0.6		0.7	3.2	3.2	2	1.6	2.0	23.2	
1				R 7	F	38	38	0.4		0.5	3.3	2.7	1.9	1.5	1.7	24.9	
1				R 7	F	39	39	0.6		0.6	3.1	3.1	2.1	1.4	1.7	25.4	
1				C	M	46	46	0.7		0.4	4.1	4.0	2.6	1.5	1.7	30.4	
1				C	M	43	43	0.4		0.6	4.0	3.0	2.2	1.3	1.9	28.0	
1				C	M	40	40	0.5		0.5	3.4	3.4	2.2	1.2	1.4	25.9	
1				C	M	48	48	0.7		0.5	4.0	4.2	2.4	1.4	1.5	32.0	
1				C	M	43	43	0.5		0.4	3.9	3.0	2.1	1.1	2.0	28.8	
1				C	M	47	47	0.5		0.4	3.9	3.8	2.1	1.2	1.4	32.6	
1				C	F	45	45	0.7		0.5	3.8	3.4	2	1.3	1.6	30.1	
1				C	F	45	45	0.5		0.4	3.9	3.3	2.4	1.2	1.8	28.8	
1				C	F	47	47	0.7		0.5	4.0	3.9	2.3	1.2	1.4	32.7	
1				C	F	43	43	0.3		0.5	4.6	3.1	2.0	1.3	1.3	28.3	
1				C	F	45	45	0.7		0.7	3.8	3.9	2.1	1.6	1.5	29.4	
1				C	F	41	41	0.6		0.5	3.6	3.5	2.3	1.3	1.8	26.7	
1				H	M	37	37	0.3		0.6	3.2	2.8	1.9	1.3	2.3	23.9	
1				H	M	36	36	0.4		0.4	3.0	2.9	1.9	1.3	2.1	23.4	
1				H	M	37	37	0.5		0.4	3.4	3.3	1.9	1.3	2.1	23.1	
1				H	M	36	36	0.4		0.6	3.7	2.4	1.6	1.2	2.1	23.4	
1				H	M	36	36	0.4		0.5	3.2	3.1	1.6	1.4	2.0	22.4	
1				H	M	42	42	0.6		0.6	3.5	3.5	2.1	1.6	2.0	27.9	
1				H	F	37	37	0.3		0.7	3.9	2.2	2.2	1.4	1.9	23.3	
1				H	F	38	38	0.5		0.5	3.4	2.9	2.2	1.4	2.4	23.8	

1				H	F	38	38	0.5		0.6	2.9	2.9	2	1.5	1.9	25.3	
1				H	F	36	36	0.4		0.4	3.7	3.1	2.1	1.5	1.8	22.6	
1				H	F	39	39	0.5		0.6	3.4	2.9	2.2	1.5	2.7	24.3	
1				H	F	38	38	0.5		0.6	3.3	2.9	2.2	1.5	2.2	23.7	
7	1	101	2	R 7	M	147	146	11.4	0.9	2.3	13.7	11.2	10.6	6.7	19.5	61.0	1.0
7	1	102	2	R 7	M	169	167	12.3	2.0	2.5	16.0	12.2	12.0	7.8	24.7	67.0	1.5
7	2	103	3	C	F	150	147	9.8	1.6	1.8	13.8	11.2	10.2	5.8	19.9	63.6	2.9
7	2	104	3	C	F	163	161	9.8	1.6	1.5	16.5	10.0	10.2	8.0	24.2	67.3	2.6
7	3	105	2	C	M	148	146	11.5	1.7	2.3	10.8	11.8	10.0	6.0	24.9	62.1	2.1
7	3	106	2	C	M	151	148	10.6	2.4	1.8	13.2	10.5	9.5	5.8	23.8	60.8	2.4
7	4	107	1	R 3	F	200	197	14.5	2.6	3.2	18.5	16.0	13.6	9.6	27.6	84.3	2.7
7	4	108	1	R 3	F	182	178	16.7	2.7	3.4	16.6	14.1	14.0	7.3	21.6	71.3	3.7
7	5	109	3	H	M	173	172	12.9	3.0	2.3	17.1	13.5	12.5	7.4	22.9	72.5	1.7
7	5	110	3	H	M	157	156	9.9	1.1	1.6	16.5	11.3	11.0	5.8	19.4	69.7	0.9
7	6	111	1	C	F	190	187	14.3	2.0	3.7	19.7	16.2	12.8	8.2	27.7	76.4	2.5
7	6	112	1	C	F	200	197	14.0	2.9	2.8	19.9	15.1	14.3	9.0	27.5	82.3	2.5
7	7	113	1	R 3	M	196	194	17.5	2.4	2.9	18.2	14.8	12.1	6.9	22.7	86.9	2.0
7	7	114	1	R 3	M	193	192	15.2	2.3	4.1	17.0	15.5	12.6	8.1	25.8	80.1	1.8
7	8	115	2	H	F	173	170	14.2	2.5	3.0	15.5	13.3	11.9	6.6	22.2	73.1	3.0
7	8	116	2	H	F	179	175	15.0	2.1	2.5	17.8	14.2	13.0	7.6	21.8	74.5	3.9
7	9	117	1	H	M	161	161	11.0	1.5	1.5	14.3	11.2	10.8	7.2	23.7	69.8	-0.2
7	9	118	1	H	M	195	194	18.9	2.7	2.9	20.0	15.1	14.1	8.6	23.3	80.6	1.3
7	10	119	2	R 7	F	194	191	16.2	2.1	1.9	18.2	15.1	15.1	8.7	23.0	80.2	2.8
7	10	120	2	R 7	F	180	177	14.7	2.5	1.8	16.0	14.1	12.9	6.4	23.4	78.4	3.0
7	11	121	1	R 7	M	170	168	13.3	2.5	2.3	13.8	13.5	10.6	8.3	22.6	70.3	1.8
7	11	122	1	R 7	M	185	188	17.1	2.7	2.7	17.0	15.6	11.9	9.3	24.7	74.9	-3.4
7	12	123	1	H	F	197	193	15.8	2.6	3.1	18.0	15.9	14.9	7.8	24.0	82.0	3.5
7	12	124	1	H	F	166	163	15.2	2.1	2.6	14.1	13.5	10.7	7.8	19.5	68.5	3.2
7	13	125	3	C	M	138	135	8.7	2.2	2.5	13.7	10.0	9.2	6.0	18.0	56.5	3.1
7	13	126	3	C	M	155	152	8.5	2.4	1.8	13.3	12.6	10.7	7.3	23.0	65.1	3.0
7	14	127	1	C	F	166	163	13.1	2.1	2.0	14.2	12.1	10.7	9.9	23.2	66.0	2.6
7	14	128	1	C	F	154	151	10.4	1.4	2.2	13.0	12.3	11.8	6.7	22.2	61.7	2.8
7	15	129	1	R 7	M	128	126	10.3	1.2	2.3	11.7	9.6	9.5	4.4	19.1	51.7	1.7
7	15	130	1	R 7	M	186	184	13.5	3.4	2.4	17.5	15.1	12.5	7.1	23.8	79.7	2.5
7	16	131	1	R 3	F	165	163	13.4	2.5	2.8	17.4	12.1	11.9	6.4	21.5	67.5	1.5
7	16	132	1	R 3	F	154	151	14.6	3.4	2.1	14.8	12.1	11.6	6.7	18.5	62.7	2.9
7	17	133	2	R 7	M	178	176	13.3	2.3	2.5	15.6	14.9	11.6	7.5	24.0	77.6	2.0
7	17	134	2	R 7	M	155	152	11.9	2.1	2.0	13.5	13.1	10.8	5.9	22.4	63.7	2.5
7	18	135	2	R 7	F	163	161	13.7	1.7	2.6	13.4	14.3	10.6	6.1	22.0	68.1	1.6
7	18	136	2	R 7	F	190	186	12.5	2.8	2.7	19.2	14.3	12.3	9.3	23.8	78.9	4.0
7	19	137	1	C	M	154	150	11.5	1.8	1.7	15.1	12.0	10.3	6.8	20.5	63.2	4.2
7	19	138	1	C	M	182	179	13.3	3.5	3.0	15.7	14.8	10.9	8.7	27.0	75.3	2.9
7	20	139	2	H	F	192	188	14.8	2.4	4.1	15.8	16.7	12.8	7.7	24.7	80.4	4.0
7	20	140	2	H	F	170	167	13.0	1.8	2.2	15.2	13.7	12.0	5.8	21.6	73.9	3.1
7	21	141	3	H	M	173	172	12.8	3.2	2.6	14.5	13.6	10.9	6.9	22.9	77.5	1.6

7	21	142	3	H	M	156	154	8.5	2.5	1.5	13.8	10.8	9.2	8.3	22.0	67.9	1.8
7	22	143	2	R 3	F	191	188	12.9	2.6	2.5	15.8	15.4	12.1	9.0	28.3	80.4	3.7
7	22	144	2	R 3	F	175	171	16.0	2.6	2.7	15.9	12.4	12.0	7.6	23.8	69.0	3.7
7	23	145	2	R 3	M	164	161	13.1	2.2	1.8	16.3	12.4	11.4	5.9	21.7	68.3	2.4
7	23	146	2	R 3	M	152	149	12.2	1.9	2.5	13.6	13.0	9.8	4.8	20.3	64.9	2.4
7	24	147	1	H	F	195	191	16.1	3.9	2.4	18.8	15.0	13.2	8.6	23.4	77.7	3.5
7	24	148	1	H	F	167	164	18.0	1.8	1.9	16.6	13.3	14.0	6.3	14.9	69.6	3.3
7	25	149	1	R 3	M	191	189	14.2	2.3	3.0	16.2	15.8	11.1	5.8	31.6	82.2	2.3
7	25	150	1	R 3	M	208	204	18.8	3.0	2.5	21.0	17.9	12.0	10.0	27.8	81.5	3.4
7	26	151	1	R 7	F	181	177	15.5	2.3	2.5	18.9	14.9	13.9	6.7	23.1	72.3	3.6
7	26	152	1	R 7	F	175	172	14.7	2.2	3.1	14.3	14.5	11.2	6.8	22.2	73.4	3.6
7	27	153	3	R 3	M	186	183	14.4	2.2	2.9	17.4	14.3	12.0	7.9	25.7	78.8	2.4
7	27	154	3	R 3	M	191	189	14.0	2.9	2.7	16.1	16.4	12.4	7.3	23.7	86.5	2.2
7	28	155	3	H	F	189	184	13.9	2.5	2.9	15.5	15.7	11.9	8.2	23.2	81.9	4.3
7	28	156	3	H	F	144	141	9.5	3.1	2.5	13.8	10.4	11.2	7.3	18.3	60.4	3.5
7	29	157	3	R 7	M	145	143	9.7	2.5	2.3	12.2	11.4	9.1	5.6	19.4	62.6	1.8
7	29	158	3	R 7	M	131	129	8.1	2.4	1.8	11.9	10.3	9.1	5.6	16.5	56.0	2.2
7	30	159	2	C	F	161	158	12.3	3.6	2.2	16.6	12.7	12.1	7.1	18.9	62.3	3.8
7	30	160	2	C	F	154	151	11.0	2.3	2.3	12.8	12.5	9.5	4.9	21.4	64.4	3.7
7	31	161	2	H	M	183	181	14.6	3.1	2.3	19.0	14.3	14.0	7.1	22.8	74.5	2.6
7	31	162	2	H	M	162	159	11.2	1.4	1.7	15.1	12.9	12.8	6.9	20.9	68.0	3.2
7	32	163	3	R 3	F	175	171	12.0	2.6	2.2	14.5	15.1	10.8	6.3	22.4	77.2	4.1
7	32	164	3	R 3	F	149	146	11.4	2.7	1.9	12.7	10.8	9.6	6.3	19.1	65.4	3.2
7	33	165	2	C	M	143	141	10.8	2.1	2.0	12.4	9.4	10.5	5.6	22.7	58.4	2.7
7	33	166	2	C	M	158	153	13.2	2.1	1.9	12.0	12.2	10.5	6.4	23.3	62.9	4.2
7	34	167	3	R 7	F	158	155	11.4	2.6	2.2	13.5	12.0	9.6	5.9	21.4	69.3	3.0
7	34	168	3	R 7	F	190	186	12.9	3.0	2.0	21.0	13.8	11.7	8.3	26.0	78.7	3.5
7	35	169	1	H	M	151	149	12.0	2.1	1.7	12.4	12.6	10.3	4.8	23.4	61.6	1.5
7	35	170	1	H	M	186	183	16.4	2.4	2.3	18.2	15.0	14.0	6.5	23.7	75.1	2.7
7	36	171	3	C	F	147	143	7.3	1.9	1.3	14.4	10.6	10.2	5.7	20.3	61.3	3.4
7	36	172	3	C	F	163	160	11.7	2.9	2.0	13.9	13.1	9.7	7.6	20.0	68.3	3.3
7	37	173	3	R 3	M	144	141	9.3	1.8	1.9	11.9	10.9	10.2	6.2	21.5	58.9	2.5
7	37	174	3	R 3	M	152	150	9.7	2.4	2.5	16.1	12.2	11.0	5.4	20.5	63.8	2.2
7	38	175	3	R 7	F	137	134	8.2	2.1	1.9	12.2	12.0	9.5	5.4	17.1	59.8	3.5
7	38	176	3	R 7	F	185	181	13.7	2.4	2.7	15.5	15.3	11.8	7.1	22.9	82.9	3.8
7	39	177	2	H	M	162	159	14.3	3.5	2.7	12.6	13.5	10.4	7.8	20.8	68.0	3.1
7	39	178	2	H	M	184	181	14.5	2.8	2.8	19.1	15.8	12.8	6.8	24.9	73.9	2.9
7	40	179	1	R 7	F	192	186	15.9	3.0	2.1	20.8	16.7	14.0	7.4	20.3	77.6	5.7
7	40	180	1	R 7	F	184	180	13.8	2.7	2.4	18.0	15.1	13.8	7.8	26.9	74.8	4.3
7	41	181	3	R 7	M	128	127	7.9	1.6	1.9	10.9	9.3	8.5	5.2	17.0	56.1	1.9
7	41	182	3	R 7	M	170	167	11.0	2.7	2.7	14.4	14.2	11.1	7.0	20.6	75.0	3.3
7	42	183	2	C	F	158	153	13.7	2.4	2.5	12.1	13.1	10.4	7.0	19.5	65.9	4.5
7	42	184	2	C	F	176	172	13.3	3.0	1.9	14.0	12.6	10.3	9.8	23.4	73.7	4.0
7	43	185	1	C	M	189	185	16.1	2.9	2.8	18.4	14.6	14.0	6.9	24.2	75.4	4.2
7	43	186	1	C	M	173	169	13.5	2.1	2.1	17.8	12.8	11.7	7.9	22.6	69.1	3.8

7	44	187	3	H	F	162	158	12.1	2.8	2.4	13.0	12.6	10.3	6.4	24.1	66.7	3.7
7	44	188	3	H	F	160	155	10.1	2.5	1.8	12.3	12.6	9.9	6.4	23.1	66.0	4.8
7	45	189	2	R 3	M	173	171	12.3	2.5	2.4	15.9	12.8	12.1	7.4	23.6	73.8	2.7
7	45	190	2	R 3	M	179	177	12.7	2.6	2.1	17.1	13.8	11.4	5.8	24.0	77.5	2.2
7	46	191	3	R 3	F	172	169	12.1	2.9	2.1	15.4	14.9	11.5	7.5	19.6	76.2	3.2
7	46	192	3	R 3	F	167	163	10.9	2.8	2.1	16.0	12.0	12.0	7.8	20.9	69.2	3.6
7	47	193	3	C	M	140	137	8.1	3.0	1.9	10.5	10.8	8.9	5.8	20.5	61.6	3.5
7	47	194	3	C	M	126	122	7.9	2.3	1.4	11.3	9.6	9.0	5.0	18.5	50.6	3.7
7	48	195	2	R 3	F	183	179	12.5	1.9	2.8	17.1	14.5	13.3	7.0	22.2	76.0	3.8
7	48	196	2	R 3	F	142	138	10.6	2.1	2.1	10.5	9.5	10.0	5.5	19.7	60.4	3.3
14	1	201	2	R 7	M	508	502	59.4	5.6	5.1	54.6	41.7	39.2	18.9	62.0	199	6
14	1	202	2	R 7	M	427	422	48.8	5.7	6.1	40.2	40.1	31.3	15.0	46.2	170	5
14	2	203	3	C	F	358	349	25.4	5.1	4.8	36.3	32.0	29.2	13.9	42.1	140	9
14	2	204	3	C	F	407	395	44.5	6.9	6.7	38.5	35.7	28.3	15.0	46.3	156	12
14	3	205	2	C	M	465	454	55.0	5.9	6.0	45.8	37.5	36.4	17.0	60.6	175	11
14	3	206	2	C	M	464	450	50.5	6.8	5.8	52.3	35.7	36.7	15.4	52.8	178	14
14	4	207	1	R 3	F	527	512	60.2	9.2	6.0	58.4	46.6	39.6	18.9	61.6	197	15
14	4	208	1	R 3	F	510	497	60.4	7.9	9.3	49.0	50.3	38.8	18.6	57.9	191	13
14	5	209	3	H	M	401	395	42.3	4.5	7.1	38.8	39.5	29.3	13.1	51.1	159	6
14	5	210	3	H	M	427	418	51.2	6.8	6.8	39.1	38.6	29.9	15.1	53.3	167	9
14	6	211	1	C	F	496	485	58.9	6.4	5.3	55.7	46.0	39.8	18.3	50.4	192	11
14	6	212	1	C	F	512	495	57.2	5.6	6.1	53.3	44.0	42.8	16.6	62.0	195	17
14	7	213	1	R 3	M	518	508	55.7	8.2	6.5	57.0	50.9	44.3	18.4	47.3	201	10
14	7	214	1	R 3	M	451	446	50.1	4.8	6.7	48.0	42.8	34.8	14.0	50.2	180	5
14	8	215	2	H	F	465	452	53.1	6.6	5.1	49.7	40.8	39.6	17.6	54.2	169	13
14	8	216	2	H	F	386	374	44.1	6.0	5.6	37.0	35.7	26.8	13.9	44.0	151	12
14	9	217	1	H	M	419	409	48.4	5.3	7.7	41.6	40.4	32.4	13.8	46.0	161	10
14	9	218	1	H	M	435	425	53.6	6.1	8.3	43.0	41.8	30.0	17.1	53.3	162	10
14	10	219	2	R 7	F	387	375	48.4	5.5	6.5	36.7	35.3	28.4	13.4	41.6	152	12
14	10	220	2	R 7	F	360	349	32.3	5.1	4.6	31.8	29.1	31.1	13.4	50.6	140	11
14	11	221	1	R 7	M	375	369	53.5	4.7	5.2	42.1	39.3	31.8	10.8	30.7	136	6
14	11	222	1	R 7	M	490	483	64.2	6.0	8.1	49.5	47.0	34.8	18.1	51.3	190	7
14	12	223	1	H	F	441	431	57.3	6.4	5.6	49.7	36.7	34.8	15.2	45.2	169	10
14	12	224	1	H	F	427	414	46.0	5.3	6.5	42.1	41.6	37.4	15.0	41.7	165	13
14	13	225	3	C	M	408	399	41.4	8.7	6.8	37.3	36.0	29.6	17.0	51.2	156	9
14	13	226	3	C	M	472	460	51.0	7.2	7.6	48.1	44.6	34.2	17.2	50.8	185	12
14	14	227	1	C	F	439	423	53.3	5.2	6.1	45.5	44.0	31.3	16.0	46.0	165	16
14	14	228	1	C	F	378	365	53.9	5.3	5.9	41.2	33.7	30.6	11.6	31.3	142	13
14	15	229	1	R 7	M	411	404	45.9	3.7	5.2	44.5	38.7	33.3	14.8	47.2	155	7
14	15	230	1	R 7	M	515	506	63.2	6.6	8.6	55.3	49.0	41.2	17.8	55.4	196	9
14	16	231	1	R 3	F	378	369	43.8	4.5	6.2	35.3	21.2	31.1	16.2	35.6	147	9
14	16	232	1	R 3	F	525	511	56.7	8.4	9.3	53.4	49.6	37.0	20.4	57.2	202	14
14	17	233	2	R 7	M	418	411	45.1	5.1	5.0	40.0	39.6	28.1	17.6	50.6	167	7
14	17	234	2	R 7	M	397	390	48.4	6.2	6.0	42.0	33.8	31.2	13.3	41.0	155	7
14	18	235	2	R 7	F	389	376	41.2	5.3	5.5	39.1	35.7	30.3	15.0	38.4	152	13

14	18	236	2	R 7	F	461	453	45.0	5.7	6.2	51.4	44.4	38.2	17.4	51.3	182	8
14	19	237	1	C	M	532	520	61.4	6.7	8.4	53.5	46.4	36.4	19.6	71.9	196	12
14	19	238	1	C	M	365	354	40.4	3.2	6.7	30.7	35.6	26.5	20.3	34.7	146	11
14	20	240	2	H	F	455	440	55.7	7.5	7.1	46.1	43.1	33.7	16.6	44.8	171	15
14	20	241	2	H	F	403	393	44.0	5.5	6.6	43.2	32.9	35.5	14.9	46.8	153	10
14	21	242	3	H	M	458	451	46.9	8.9	5.9	51.6	37.8	38.3	19.3	49.7	180	7
14	21	243	3	H	M	332	327	30.5	4.1	4.4	32.2	27.9	26.2	12.2	48.1	125	5
14	22	244	2	R 3	F	323	313	32.4	4.7	4.3	35.3	24.1	25.8	10.6	34.3	128	10
14	22	245	2	R 3	F	301	291	29.7	3.6	5.8	33.4	28.4	27.4	8.8	29.3	116	10
14	23	246	2	R 3	M	404	397	43.8	5.4	5.4	47.1	37.7	30.6	12.2	41.1	158	7
14	23	247	2	R 3	M	384	383	44.3	4.6	5.8	46.3	36.9	32.7	12.4	37.9	150	1
14	24	248	1	H	F	499	485	61.5	6.2	7.6	50.3	40.4	41.5	18.3	50.3	188	14
14	24	249	1	H	F	445	432	46.9	6.1	7.2	44.1	42.2	34.4	17.3	47.0	168	13
14	25	250	1	R 3	M	479	469	58.3	5.3	8.0	50.5	41.6	37.2	16.3	60.4	175	10
14	25	251	1	R 3	M	446	438	53.7	5.3	7.2	42.0	42.7	33.8	15.4	46.9	176	8
14	26	252	1	R 7	F	461	446	50.6	4.8	7.5	49.6	38.2	32.4	16.2	65.3	175	15
14	26	253	1	R 7	F	424	411	46.3	5.8	5.4	45.9	36.8	34.1	12.6	48.4	164	13
14	27	254	3	R 3	M	411	407	37.2	4.7	3.9	41.3	38.6	31.0	11.2	45.2	173	4
14	27	255	3	R 3	M	272	268	25.2	3.8	4.6	25.4	26.4	21.4	7.4	32.0	112	4
14	28	256	3	H	F	374	361	40.0	4.7	5.4	35.3	34.6	27.4	14.4	40.0	146	13
14	28	257	3	H	F	412	401	35.4	6.7	6.1	41.3	34.2	32.9	15.9	43.1	172	11
14	29	258	3	R 7	M	303	298	27.1	4.1	4.8	30.5	29.5	20.8	9.9	37.7	126	5
14	29	259	3	R 7	M	406	399	39.1	6.6	6.0	43.1	35.8	34.3	15.4	38.8	162	7
14	30	260	2	C	F	436	423	47.3	7.7	5.2	41.1	38.5	36.2	15.9	48.4	168	13
14	30	261	2	C	F	426	414	52.2	5.9	7.8	44.3	40.0	30.9	16.7	41.5	163	12
14	31	262	2	H	M	414	406	47.7	6.0	6.5	36.4	37.7	32.0	13.2	45.6	165	8
14	31	263	2	H	M	417	411	45.9	4.9	6.3	41.7	37.2	37.0	13.3	46.5	162	6
14	32	264	3	R 3	F	445	434	43.6	8.5	7.0	47.8	38.5	36.7	17.5	46.9	178	11
14	32	265	3	R 3	F	358	348	31.8	3.3	6.0	33.0	30.2	28.2	11.8	40.9	146	10
14	33	266	2	C	M	509	494	68.8	7.4	7.3	52.0	47.5	38.6	16.9	47.7	191	15
14	33	267	2	C	M	380	371	39.0	5.6	5.3	33.9	29.2	33.1	13.6	48.0	144	9
14	34	268	3	R 7	F	415	402	38.8	7.1	6.9	43.5	32.1	33.4	15.6	45.7	167	13
14	34	269	3	R 7	F	330	323	33.9	4.7	5.2	30.5	30.1	23.9	14.8	36.0	132	7
14	35	270	1	H	M	433	427	51.5	4.6	7.3	42.8	43.0	33.0	17.4	50.9	162	6
14	35	271	1	H	M	405	398	51.3	4.9	6.8	40.9	39.7	30.5	15.2	46.2	156	7
14	36	272	3	C	F	379	370	40.1	5.1	5.8	33.2	31.7	25.5	16.0	49.5	147	9
14	36	273	3	C	F	274	266	22.1	4.7	4.1	27.1	23.1	22.3	12.2	34.8	107	8
14	37	274	3	R 3	M	277	272	24.6	3.2	5.1	26.0	24.1	19.5	12.6	30.0	117	5
14	37	275	3	R 3	M	331	324	26.4	4.4	4.5	33.6	27.5	25.5	12.9	45.1	133	7
14	38	276	3	R 7	F	409	397	38.4	6.8	4.0	44.9	39.4	33.4	15.8	41.4	162	12
14	38	277	3	R 7	F	408	397	41.6	9.1	5.9	43.0	31.1	33.0	14.6	44.9	160	11
14	39	279	2	H	M	500	489	67.0	9.1	5.9	50.9	45.8	42.5	15.6	56.1	180	11
14	39	280	2	H	M	368	361	39.2	5.1	7.4	38.6	29.7	26.8	15.4	39.1	147	7
14	40	281	1	R 7	F	425	412	48.2	15.2	8.8	46.2	39.6	31.7	13.9	36.8	173	13
14	40	282	1	R 7	F	458	446	56.6	7.0	8.2	46.9	42.5	32.5	14.4	42.0	180	12

14	41	283	3	R 7	M	386	381	40.5	5.6	7.9	44.7	27.8	28.0	14.8	52.6	150	5
14	41	284	3	R 7	M	414	409	38.5	7.3	4.9	46.3	35.9	32.3	17.4	53.2	161	5
14	42	285	2	C	F	534	518	67.0	11.5	5.5	63.2	32.6	41.3	14.4	61.4	202	16
14	42	286	2	C	F	431	420	50.5	6.5	7.9	50.0	32.9	30.5	14.6	46.9	171	11
14	43	287	1	C	M	436	423	50.4	6.2	6.7	44.8	37.1	35.1	13.5	53.0	161	13
14	43	288	1	C	M	404	380	48.8	5.3	8.4	46.7	31.2	32.3	14.3	52.3	146	24
14	44	289	3	H	F	370	362	45.3	5.4	6.2	35.2	31.6	26.1	12.8	40.4	143	8
14	44	290	3	H	F	452	439	48.4	6.3	7.7	42.8	40.5	31.5	14.8	54.2	177	13
14	45	291	2	R 3	M	432	423	52.6	5.8	7.2	39.7	41.0	31.4	11.8	43.7	177	9
14	45	292	2	R 3	M	408	402	47.8	5.5	7.7	43.0	32.7	28.4	12.5	48.8	162	6
14	46	293	3	R 3	F	458	446	50.3	7.3	4.8	43.9	38.3	34.4	16.6	52.4	184	12
14	46	294	3	R 3	F	456	441	43.4	5.5	6.1	50.9	39.6	38.5	14.9	49.5	181	15
14	47	295	3	C	M	359	349	35.3	6.1	6.0	32.9	32.0	26.7	11.0	47.1	142	10
14	47	296	3	C	M	454	441	44.4	7.3	5.3	45.3	36.2	35.2	17.5	54.9	181	13
14	48	297	2	R 3	F	429	415	50.7	6.3	4.3	44.7	36.6	33.5	13.5	49.3	165	14
14	48	298	2	R 3	F	373	361	37.5	6.0	5.0	43.6	25.3	31.7	13.0	38.9	148	12
21	1	301	2	R 7	M	658	649	76.6	7.6	10.0	67.8	60.5	55.0	21.5	84.7	249	9
21	1	302	2	R 7	M	622	615	76.0	6.5	9.4	63.9	50.2	52.3	18.1	81.2	240	7
21	2	303	3	C	F	819	794	109.0	13.5	11.2	85.5	68.8	66.4	24.1	80.8	317	25
21	2	304	3	C	F	781	760	104.0	14.3	13.5	82.3	70.6	66.2	23.8	75.5	298	21
21	3	305	2	C	M	888	864	111.0	14.3	11.1	106	73.0	72.4	29.4	89.8	333	24
21	3	306	2	C	M	887	858	127.0	12.8	13.9	94.3	85.7	66.5	21.5	85.3	324	29
21	4	307	1	R 3	F	1021	991	151.0	14.8	12.8	112	95.5	84.1	26.2	89.1	386	30
21	4	308	1	R 3	F	792	764	110.0	9.2	12.4	77.4	74.1	62.1	31.0	98.2	275	28
21	5	309	3	H	M	652	634	70.1	11.3	6.7	67.1	57.9	53.7	18.1	63.4	262	18
21	5	310	3	H	M	784	765	94.1	10.2	12.6	88.9	69.1	70.7	23.9	72.3	305	19
21	6	311	1	C	F	775	755	110.0	9.6	12.0	89.0	68.8	63.7	22.5	75.8	276	20
21	6	312	1	C	F	876	845	115.0	12.7	15.3	85.5	83.3	69.2	30.7	82.1	320	31
21	7	313	1	R 3	M	979	958	137.1	11.7	11.1	111	91.5	77.7	33.9	101.0	367	21
21	7	314	1	R 3	M	823	798	117.0	15.3	10.3	80.5	70.9	63.3	27.3	84.3	303	25
21	8	315	2	H	F	834	798	113.0	12.5	11.9	82.0	75.6	68.1	24.5	78.8	310	36
21	8	316	2	H	F	747	709	110.0	12.6	12.4	79.1	63.1	68.0	20.2	78.2	266	38
21	9	317	1	H	M	902	877	114.0	12.0	13.8	92.9	86.4	81.0	27.6	84.8	336	25
21	9	318	1	H	M	960	937	133.0	15.1	11.3	104	96.2	76.5	28.6	83.8	362	23
21	10	319	2	R 7	F	787	765	97.1	10.1	14.0	83.2	76.8	59.9	22.3	77.2	309	22
21	10	320	2	R 7	F	755	733	92.0	9.9	12.8	76.7	76.0	58.9	22.6	74.7	288	22
21	11	321	1	R 7	M	883	857	116.0	12.9	15.4	89.0	88.1	69.5	28.8	81.4	336	26
21	11	322	1	R 7	M	861	836	111.0	16.1	12.7	96.4	80.1	68.2	26.4	102.0	311	25
21	12	323	1	H	F	785	756	111.0	10.5	12.0	79.2	71.0	70.2	23.9	71.4	290	29
21	12	324	1	H	F	542	528	71.5	7.8	9.1	55.9	50.4	39.7	19.1	57.8	204	14
21	13	325	3	C	M	816	790	100.0	14.3	12.8	81.9	79.1	59.9	25.0	84.2	300	26
21	13	326	3	C	M	800	779	102.0	13.3	11.8	92.5	72.5	59.9	27.7	87.7	288	21
21	14	327	1	C	F	919	891	147.0	15.1	16.7	103	91.4	70.1	26.8	74.7	327	28
21	14	328	1	C	F	816	786	123.0	10.9	13.2	86.7	75.9	66.4	25.6	81.8	292	30
21	15	329	1	R 7	M	789	769	97.1	13.5	11.4	84.3	73.9	69.4	22.5	73.8	307	20

21	15	330	1	R 7	M	871	849	121.0	12.3	13.8	88.0	89.8	67.4	30.4	83.5	322	22
21	16	331	1	R 3	F	619	600	84.8	7.0	11.5	65.4	63.5	47.4	19.0	65.5	224	19
21	16	332	1	R 3	F	589	568	86.1	7.5	11.7	57.7	57.7	45.3	18.6	50.7	218	21
21	17	333	2	R 7	M	670	656	80.7	10.9	10.5	76.1	67.2	60.2	23.2	59.2	248	14
21	17	334	2	R 7	M	751	731	85.5	10.8	10.5	83.6	75.7	66.6	21.0	69.4	289	20
21	18	335	2	R 7	F	720	691	93.7	11.0	11.5	70.9	71.2	54.2	20.5	74.6	271	29
21	18	336	2	R 7	F	856	826	106.0	13.4	11.8	104	79.4	74.4	28.0	89.1	313	30
21	19	337	1	C	M	785	759	93.9	11.1	14.5	82.8	72.1	64.7	23.5	85.9	300	26
21	19	338	1	C	M	968	943	142.0	13.6	14.7	106	96.0	77.2	30.9	91.9	351	25
21	20	339	2	H	F	721	698	95.4	11.0	12.3	82.3	69.4	65.4	21.4	67.7	259	23
21	20	340	2	H	F	692	670	90.3	10.3	12.1	71.1	65.6	52.9	22.6	65.9	257	22
21	21	341	3	H	M	673	654	77.0	8.6	9.1	68.8	64.6	57.3	20.8	68.7	268	19
21	21	342	3	H	M	645	625	75.9	8.3	10.1	73.5	60.0	56.6	18.8	62.1	250	20
21	22	343	2	R 3	F	708	675	104.0	12.2	11.7	73.6	65.2	52.8	24.2	57.6	261	33
21	22	344	2	R 3	F	830	801	102.0	7.0	15.0	84.4	79.7	66.2	27.1	81.7	316	29
21	23	345	2	R 3	M	864	851	111.0	10.2	14.2	84.8	88.5	61.5	27.9	81.1	340	13
21	23	346	2	R 3	M	834	819	105.0	9.1	11.6	95.9	86.1	71.9	25.8	71.8	316	15
21	24	347	1	H	F	762	728	107.0	11.3	14.0	78.6	74.1	69.7	24.5	71.7	266	34
21	24	348	1	H	F	720	698	85.9	9.4	10.5	76.0	66.9	61.1	26.3	69.9	271	22
21	25	349	1	R 3	M	573	564	60.3	6.1	9.9	60.8	60.6	44.1	30.2	60.2	216	9
21	25	350	1	R 3	M	843	825	124.0	10.6	12.8	90.1	80.0	69.3	25.4	82.7	302	18
21	26	351	1	R 7	F	788	760	101.0	12.1	13.0	81.0	71.2	70.1	22.5	73.2	300	28
21	26	352	1	R 7	F	882	854	117.0	13.2	15.0	90.3	85.0	68.5	25.8	81.8	337	28
21	27	353	3	R 3	M	872	846	109.0	11.4	13.5	91.3	86.3	66.4	27.0	91.1	328	26
21	27	354	3	R 3	M	722	708	75.7	11.5	10.1	78.8	66.3	58.1	20.9	82.2	284	14
21	28	355	3	H	F	865	841	118.0	10.6	13.8	90.9	79.7	69.2	28.3	88.9	325	24
21	28	356	3	H	F	740	716	85.2	7.0	12.5	78.5	67.5	58.6	23.2	76.8	276	24
21	29	357	3	R 7	M	667	648	76.7	8.3	9.5	75.8	66.7	59.9	19.1	62.7	253	19
21	29	358	3	R 7	M	611	594	65.7	10.5	9.6	63.2	55.3	54.1	20.0	63.9	234	17
21	30	359	2	C	F	715	691	99.7	9.8	11.2	74.5	66.2	53.5	20.4	71.9	265	24
21	30	360	2	C	F	546	526	75.9	7.0	9.4	57.2	55.2	48.6	13.4	41.8	201	20
21	31	361	2	H	M	931	908	132.0	13.7	13.9	99.2	84.8	78.3	24.0	99.2	341	23
21	31	362	2	H	M	899	871	128.0	15.5	12.4	101	82.4	74.8	24.2	85.4	330	28
21	32	363	3	R 3	F	680	662	80.2	8.4	9.9	69.2	64.4	50.0	20.0	82.3	256	18
21	32	364	3	R 3	F	727	706	64.7	14.5	10.0	72.0	66.1	61.1	22.9	93.5	277	21
21	33	365	2	C	M	850	825	125.0	10.2	14.6	90.8	83.6	72.8	25.4	73.7	311	25
21	33	366	2	C	M	812	783	108.0	16.3	12.7	87.3	73.4	67.7	22.6	77.2	293	29
21	34	367	3	R 7	F	680	654	84.4	13.1	10.0	72.0	59.1	59.2	19.5	74.2	249	26
21	34	368	3	R 7	F	700	680	82.8	9.6	12.6	75.4	72.2	52.4	21.5	68.1	271	20
21	35	369	1	H	M	794	766	102.0	10.7	12.6	82.1	74.2	60.4	22.1	79.3	301	28
21	35	370	1	H	M	999	972	143.0	13.7	16.6	114	96.6	81.5	29.5	108	347	27
21	36	371	3	C	F	652	634	91.2	9.2	10.6	66.3	57.9	49.8	16.6	62.3	253	18
21	36	372	3	C	F	595	575	68.0	9.3	7.9	61.5	52.4	40.4	19.3	60.6	237	20
21	37	373	3	R 3	M	539	527	51.3	6.6	9.6	56.9	49.6	46.8	17.2	53.9	214	12
21	37	374	3	R 3	M	415	407	36.1	6.1	6.2	45.3	39.6	29.1	13.1	41.2	175	8

21	38	375	3	R 7	F	673	652	66.7	10.8	10.0	79.2	67.6	60.0	22.2	68.7	250	21
21	38	376	3	R 7	F	668	645	67.8	8.1	11.3	70.0	58.8	48.0	20.2	78.1	266	23
21	39	377	2	H	M	778	759	103.0	11.7	14.3	79.6	72.4	66.7	25.6	79.7	290	19
21	39	378	2	H	M	720	709	93.9	12.3	12.1	75.2	71.6	62.5	23.2	85.2	262	11
21	40	379	1	R 7	F	938	905	115.0	12.9	13.9	103	86.0	78.0	29.7	105	352	33
21	40	380	1	R 7	F	707	668	108.0	7.9	11.6	72.8	68.1	55.8	19.9	58.7	255	39
21	41	381	3	R 7	M	634	628	61.1	8.7	9.3	73.3	65.5	54.3	19.2	76.2	250	6
21	41	382	3	R 7	M	512	501	54.2	6.9	7.5	49.9	47.6	38.5	16.9	53.8	208	11
21	42	383	2	C	F	749	724	102.0	13.4	12.7	80.4	65.8	64.5	23.0	66.1	272	25
21	42	384	2	C	F	875	841	107.0	15.4	15.4	93.6	75.8	67.2	29.8	89.0	320	34
21	43	385	1	C	M	1060	1031	162.0	14.9	19.5	112	96.7	87.5	45.9	82.8	391	29
21	43	386	1	C	M	1038	1008	151.0	17.4	13.8	115	103	85.6	30.2	79.6	382	30
21	44	387	3	H	F	796	772	98.5	11.5	14.3	88.1	71.2	64.9	23.2	84.2	295	24
21	44	388	3	H	F	740	711	87.2	14.5	12.3	82.8	68.3	58.3	20.2	74.1	280	29
21	45	389	2	R 3	M	811	796	105.0	10.7	12.9	85.2	86.0	58.2	28.4	78.6	307	15
21	45	390	2	R 3	M	663	649	82.4	9.5	11.9	69.2	56.4	56.4	21.3	84.4	239	14
21	46	391	3	R 3	F	844	819	97.8	14.3	15.0	99.9	73.7	68.0	29.0	78.4	320	25
21	46	392	3	R 3	F	676	655	80.8	9.6	11.8	77.7	64.4	59.1	17.2	62.3	259	21
21	47	393	3	C	M	847	822	111.0	14.4	11.5	90.0	86.1	60.5	29.2	83.3	318	25
21	47	394	3	C	M	744	718	102.0	11.0	13.4	82.7	78.6	63.2	23.4	62.6	272	26
21	48	395	2	R 3	F	898	867	139.0	12.6	14.2	96.8	90.2	64.3	26.4	82.8	323	31
21	48	396	2	R 3	F	608	587	66.6	9.7	12.6	66.8	58.8	53.5	19.4	62.5	225	21
21	24	397	1	H	F	839	804	123	9.5	16.2	83.8	79.8	65.8	24.1	76.6	309	35
21	24	398	1	H	F	888	862	138	13.5	16.3	99.4	82.6	74.9	22.5	88.6	309	26
28	1	401	2	R 7	M	1417	1355	196	13.5	21.3	157	134	123	31.1	126	503	62
28	1	402	2	R 7	M	1543	1451	218	18.8	21.4	168	156	121	42.8	133	544	92
28	2	403	3	C	F	1474	1397	236	22.1	18.7	162	124	124	40.5	120	533.0	77
28	2	404	3	C	F	1374	1331	218	19.9	21.9	154	112	108	37.9	128	489	43
28	3	405	2	C	M	1705	1631	277	18.9	23.8	185	149	133	47.3	140	608	74
28	3	406	2	C	M	1603	1533	252	20.9	22.3	172	154	125	42.7	127	565	70
28	4	407	1	R 3	F	1567	1392	235	22.1	18.5	171	157	105	42.0	152	537	175
28	4	408	1	R 3	F	1546	1477	244	20.6	19.9	191	134	120	36.6	127	553	69
28	5	409	3	H	M	1230	1184	147	16.4	18.7	144	115	113	35.3	99	474	46
28	5	410	3	H	M	1441	1383	207	16.9	18.0	162	123	115	39.4	124	538	58
28	6	411	1	C	F	1659	1602	257	22.2	23.7	208	171	144	43.2	129	561	57
28	6	412	1	C	F	1571	1515	232	23.8	32.3	199	141	125	38.9	127	532	56
28	7	413	1	R 3	M	1926	1865	307	28.0	25.6	223	191	132	62.5	163	688	61
28	7	414	1	R 3	M	1509	1452	210	13.6	22.5	174	152	116	37.5	119	572	57
28	8	415	2	H	F	1392	1305	210	17.8	18.3	146	118	115	35.3	118	490	87
28	8	416	2	H	F	1337	1252	202	17.5	20.4	145	115	118	25.5	115	483	85
28	9	417	1	H	M	1808	1744	302	17.5	33.2	181	167	148	51.7	171	624	64
28	9	418	1	H	M	1752	1704	301	26.3	23.1	188	163	129	49.8	134	593	48
28	10	419	2	R 7	F	1353	1287	178	18.0	20.2	142	131	99.9	36.5	125	487	66
28	10	420	2	R 7	F	1349	1282	181	16.7	15.8	155	114	111	36.8	142	475	67
28	11	421	1	R 7	M	1598	1512	236	19.8	19.9	165	153	119	39.7	168	551	86

28	11	422	1	R 7	M	1604	1522	216	18.2	21.4	184	151	123	40.3	154	582	82
28	12	423	1	H	F	1425	1370	219	21.6	24.3	156	130	121	35.8	120	505	55
28	12	424	1	H	F	1467	1400	227	22.9	23.5	160	123	113	30.7	143	514	67
28	13	425	3	C	M	1144	1114	157	12.6	17.9	135	108	90.8	37.5	101	427	30
28	13	426	3	C	M	1126	1101	140	25.6	15.1	127	95.1	88.4	61.7	86.3	426	25
28	14	427	1	C	F	661	641	93.25	11.6	12.5	68.6	66.6	55.4	22.5	53.7	237	20
28	14	428	1	C	F	1370	1294	202	18.1	17.7	152	139	99.5	37.0	129	467	76
28	15	429	1	R 7	M	1703	1590	257	22.3	22.8	177	179	118	46.0	133	589	113
28	15	430	1	R 7	M	1657	1593	261	23.7	24.1	172	163	124	42.2	129	582	64
28	16	431	1	R 3	F	1190	1153	170	19.4	19.2	118	110	102	33.8	113	432	37
28	16	432	1	R 3	F	1451	1402	220	24.8	21.4	151	141	121	43.0	130	511	49
28	17	433	2	R 7	M	1485	1437	231	22.0	21.9	162	147	125	39.0	129	538	48
28	17	434	2	R 7	M	1418	1372	204	22.7	25.2	161	135	116	37.5	118	499	46
28	18	435	2	R 7	F	1236	1165	186	17.4	18.0	137	129	91.0	31.2	130	430	71
28	18	436	2	R 7	F	603	588	60.46	6.3	8.7	56.4	55.0	42.3	26.3	77.8	233	15
28	19	437	1	C	M	1633	1573	266	17.4	27.6	180	151	132	47.8	131	564	60
28	19	438	1	C	M	1773	1720	285	22.4	21.7	187	168	124	51.8	168	630	53
28	20	439	2	H	F	1135	1088	178	15.3	15.4	137	98.6	109	29.9	93.2	385	47
28	20	440	2	H	F	1229	1178	184	14.9	28.2	142	110	108	38.5	102	414	51
28	21	441	3	H	M	1208	1171	174	16.0	19.5	133	111	93.4	37.9	107	450	37
28	21	442	3	H	M	1119	1090	131	14.9	20.3	117	106	97.0	38.9	124	406	29
28	22	443	2	R 3	F	1350	1288	201	14.9	21.2	160	129	103	32.1	101	475	62
28	22	444	2	R 3	F	1265	1214	172	15.1	18.4	144	123	106	36.4	118	430	51
28	23	445	2	R 3	M	1263	1225	173	16.4	16.9	138	124	108	34.7	112	461	38
28	23	446	2	R 3	M	1509	1463	216	20.7	22.9	173	152	113	43.3	140	548	46
28	24	447	1	H	F	1357	1300	226	18.0	21.8	146	117	113	42.1	120	468	57
28	24	448	1	H	F	1458	1389	270	17.0	19.7	148	139	107	41.2	150	471	69
28	25	449	1	R 3	M	1691	1523	236	20.3	22.3	196	171	116	42.4	145	609	168
28	25	450	1	R 3	M	1580	1474	222	25.1	22.8	183	163	135	42.0	127	551	106
28	26	451	1	R 7	F	1305	1224	206	16.2	17.3	132	122	99.0	34.3	107	454	81
28	26	452	1	R 7	F	1530	1385	210	21.5	21.3	182	129	121	30.7	118	542	145
28	27	453	3	R 3	M	1633	1572	223	30.0	22.1	176	169	123	45.2	125	622	61
28	27	454	3	R 3	M	1429	1396	182	17.6	18.4	167	147	103	42.2	141	533	33
28	28	455	3	H	F	1367	1282	195	23.9	17.5	154	122	104	38.7	129	460	85
28	28	456	3	H	F	1259	1192	175	14.8	16.5	144	117	84.2	37.3	114	454	67
28	29	457	3	R 7	M	1535	1441	198	21.8	21.1	185	136	120	35.3	124	582	94
28	29	458	3	R 7	M	1602	1505	200	19.8	22.3	174	141	127	45.4	145	594	97
28	30	459	2	C	F	1456	1403	265	16.9	18.0	175	135	123	36.8	97.6	489	53
28	30	460	2	C	F	1396	1330	218	20.8	18.2	155	113	116	38.2	113	473	66
28	31	461	2	H	M	1579	1516	254	16.2	19.1	181	151	128	45.0	136	539	63
28	31	462	2	H	M	1553	1487	223	22.2	22.4	174	140	133	44.4	130	557	66
28	32	463	3	R 3	F	1248	1151	197	15.3	17.3	134	125	95.15	33.6	113	449	97
28	32	464	3	R 3	F	1383	1327	208	19.6	19.2	152	127	95.98	34.2	110	483	56
28	33	465	2	C	M	1540	1483	247	20.1	22.4	176	126	128	46.6	140	549	57
28	33	466	2	C	M	1583	1515	241	23.5	23.9	181	197	122	45.0	133	562	68

28	34	467	3	R 7	F	1317	1168	173	16.4	19.7	141	126	103	37.5	124	475	149
28	34	468	3	R 7	F	1387	1321	169	17.4	20.0	154	126	113	32.4	122	523	66
28	35	469	1	H	M	1644	1560	228	21.2	20.3	174	144	139	43.2	168.0	579	84
28	35	470	1	H	M	1537	1443	237	17.5	22.4	164	140	130	40.5	132	518	94
28	36	471	3	C	F	1302	1462	194	21.8	24.0	183	148	115	46.6	150	542	-160
28	36	472	3	C	F	1316	1191	170	20.6	17.4	152	103	70	36.1	123	448	125
28	37	473	3	R 3	M	1335	1276	203	14.3	19.3	154	132	103	33.3	110	473	59
28	37	474	3	R 3	M	1483	1380	193	21.1	22.2	165	141	123	46.6	134	548	103
28	38	475	3	R 7	F	1179	1130	138	15.3	18.0	137	111	92.1	36.6	100	445	49
28	38	476	3	R 7	F	1335	1223	189	21.3	14.6	150	134	82.7	39.8	114	484	112
28	39	477	2	H	M	1675	1594	246	24.4	24.2	175	162	115	49.2	138	619	81
28	39	478	2	H	M	1651	1602	237	22.2	24.9	186	145	137	54.1	128	608	49
28	40	479	1	R 7	F	1493	1389	229	14.0	20.0	172	144	123	36.3	145	522	104
28	40	480	1	R 7	F	1507	1421	234	19.6	21.3	159	144	106	43.4	142	504	86
28	41	481	3	R 7	M	1477	1384	192	16.0	22.6	161	132	116	44.0	139	540	93
28	41	482	3	R 7	M	1536	1216	186	20.2	16.6	136	120	88.9	44.9	123	439	320
28	42	483	2	C	F	1300	1240	191	17.5	16.5	139	110	93.4	38.2	126	459	60
28	42	484	2	C	F	1367	1267	174	9.9	18.8	146	114	113	36.7	126	495	100
28	43	485	1	C	M	1792	1680	256	25.6	24.4	185	152	140	46.4	139	665	112
28	43	486	1	C	M	1848	1760	282	18.6	25.5	215	168	140	49.9	161	659	88
28	44	487	3	H	F	1519	1438	234	28.1	17.9	156	127	123	44.9	119	558	81
28	44	488	3	H	F	1267	1185	178	19.6	19.4	141	115	101	33.4	97.7	452	82
28	45	489	2	R 3	M	1209	1168	163	16.3	20.0	123	111	96.1	35.0	98.0	445	41
28	45	490	2	R 3	M	1414	1252	243	14.7	20.0	138	145	102	34.0	108	480	162
28	46	491	3	R 3	F	1343	1265	171	16.9	17.7	149	108	103	44.7	109	489	78
28	46	492	3	R 3	F	1360	1288	172	12.4	23.6	158	123	117	38.7	112	483	72
28	47	493	3	C	M	1582	1477	229	27.0	19.7	177	144	131	39.6	147	546	105
28	47	494	3	C	M	1454	1385	194	20.7	16.8	161	127	111	44.6	143	542	69
28	48	495	2	R 3	F	1224	1158	169	16.4	17.1	137	117	107	36.5	95.7	438	66
28	48	496	2	R 3	F	1281	1205	186	13.1	19.8	139	113	104	33.0	118	439	76
35	1	501	2	R 7	M	1777	1713	274	13.3	29.1	169	138	181	51.0	157	640	64
35	1	502	2	R 7	M	1973	1896	296	19.0	31.2	217	195	156	51.0	151	717	77
35	2	503	3	C	F	1967	1886	382	38.0	27.3	219	166	130	49.7	125	680	81
35	2	504	3	C	F	1787	1714	320	19.7	20.5	210	161	127	53.8	109	641	73
35	3	505	2	C	M	1971	1904	381	21.5	29.1	207	182	149	59.3	130	681	67
35	3	506	2	C	M	1999	1909	370	27.4	30.6	235	199	143	61.6	120	670	90
35	4	507	1	R 3	F	1915	1840	331	28.5	26.1	223	191	138	62.1	156	630	75
35	4	508	1	R 3	F	1815	1732	282	22.0	22.0	195	182	127	63.6	170	599	83
35	5	509	3	H	M	1792	1713	245	11.9	24.4	210	168	145	58.1	132	676	79
35	5	510	3	H	M	2009	1901	325	20.2	25.6	211	185	163	66.0	143	740	108
35	6	511	1	C	F	2320	2233	447	39.9	28.9	250	208	152	74.2	179	798	87
35	6	512	1	C	F	1971	1881	385	26.3	23.4	207	181	164	63.7	157	639	90
35	7	513	1	R 3	M	1720	1654	252	23.4	22.7	182	181	130	39.1	141	647	66
35	7	514	1	R 3	M	1737	1674	250	19.0	23.2	191	188	130	61.3	148	613	63
35	8	515	2	H	F	1704	1623	282	14.6	23.8	190	160	122	51.0	112	620	81

35	8	516	2	H	F	1928	1835	361	24.4	24.0	198	163	149	47.2	158	642	93
35	9	517	1	H	M	2129	2001	405	27.6	28.9	235	213	155	51.9	133	745	128
35	9	518	1	H	M	2299	2168	380	27.9	31.3	232	231	166	65.2	196	788	131
35	10	519	2	R 7	F	1669	1573	244	26.0	24.9	184	162	120	42.2	124	579	96
35	10	520	2	R 7	F	2002	1897	293	25.8	29.7	222	177	167	44.5	169	692	105
35	11	521	1	R 7	M	2316	2182	364	26.8	33.8	259	228	169	52.0	171	812	134
35	11	522	1	R 7	M	1698	1641	238	13.3	23.5	180	182	138	64.4	111	639	57
35	12	523	1	H	F	1753	1677	361	27.7	17.3	186	162	127	41.2	123	581	76
35	12	524	1	H	F	1951	1824	351	24.7	21.4	209	176	155	42.0	140	658	127
35	13	525	3	C	M	2138	2023	321	31.3	26.3	224	188	169	65.8	166	759	115
35	13	526	3	C	M	1722	1654	257	26.0	27.8	206	183	136	46.7	114	615	68
35	14	527	1	C	F	1783	1688	333	26.4	21.6	191	159	134	46.1	115	623	95
35	14	528	1	C	F	1740	1632	315	23.4	24.3	197	183	127	42.0	99.3	593	108
35	15	529	1	R 7	M	2280	2179	332	20.0	33.2	261	221	161	58.0	193	843	101
35	15	530	1	R 7	M	2345	2263	385	16.8	33.6	277	232	157	55.9	206	862	82
35	16	531	1	R 3	F	1657	1596	205	14.8	21.0	192	155	125	67.1	173	590	61
35	16	532	1	R 3	F	1766	1682	273	24.9	25.6	185	159	137	51.0	145	636	84
35	17	533	2	R 7	M	1952	1868	257	22.2	22.6	209	189	156	58.9	142	746	84
35	17	534	2	R 7	M	1838	1767	253	13.9	33.6	202	182	137	43.9	121	719	71
35	18	535	2	R 7	F	1872	1702	286	24.5	25.5	213	191	151	58.1	134	672	170
35	18	536	2	R 7	F	1926	1850	335	22.4	31.4	222	190	145	51.6	152	661	76
35	19	537	1	C	M	2241	2151	385	32.8	29.4	255	210	165	68.5	178	769	90
35	19	538	1	C	M	2247	2159	382	20.4	29.7	253	221	165	54.0	162	809	88
35	20	539	2	H	F	1613	1545	224	19.5	34.2	179	147	138	44.8	102	615	68
35	20	540	2	H	F	1999	1919	270	18.4	29.2	209	175	154	66.6	148	807	80
35	21	541	3	H	M	1917	1834	314	31.3	28.8	202	187	133	63.6	154	677	83
35	21	542	3	H	M	2042	1962	293	13.8	29.4	236	208	159	58.3	155	773	80
35	22	543	2	R 3	F	1728	1638	261	25.9	25.7	203	180	117	52.5	126	595	90
35	22	544	2	R 3	F	1555	1465	243	26.7	24.7	164	158	117	51.6	113	553	90
35	23	545	2	R 3	M	2039	1965	279	14.2	27.1	250	197	160	71.2	145	766	74
35	23	546	2	R 3	M	2049	1836	326	25.0	30.9	228	211	148	55.4	169	703	213
35	24	547	1	H	F	1805	1731	336	18.5	23.1	196	149	134	43.8	178	599	74
35	24	548	1	H	F	1976	1884	370	19.7	29.5	213	180	161	52.7	153	680	92
35	25	549	1	R 3	M	2012	1930	326	18.4	28.7	240	203	159	47.5	156	675	82
35	25	550	1	R 3	M	1983	1887	298	22.5	27.7	204	215	167	44.0	165	677	96
35	26	551	1	R 7	F	1800	1727	285	26.6	23.3	204	170	128	45.7	136	664	73
35	26	552	1	R 7	F	1896	1827	298	22.1	27.4	209	182	159	61.0	170	648	69
35	27	553	3	R 3	M	1922	1849	277	12.9	28.4	213	174	129	58.3	158	736	73
35	27	554	3	R 3	M	1630	1563	218	21.4	23.4	181	174	119	49.5	122	609	67
35	28	555	3	H	F	1599	1535	242	21.7	21.1	180	162	117	52.9	124	575	64
35	28	556	3	H	F	1758	1687	289	25.5	26.8	199	157	148	49.9	138	608	71
35	29	557	3	R 7	M	2065	2004	253	28.2	34.2	230	188	154	63.2	159	836	61
35	29	558	3	R 7	M	1889	1804	264	20.4	27.5	212	183	144	57.0	138	698	85
35	30	559	2	C	F	1876	1804	338	27.4	27.5	204	163	152	49.6	133	665	72
35	30	560	2	C	F	1946	1846	314	25.4	25.4	212	159	143	65.5	142	725	100

35	31	561	2	H	M	2201	2131	378	21.3	33.0	237	195	168	58.0	146	833	70
35	31	562	2	H	M	2285	2197	363	18.6	29.5	243	210	191	88.8	162	822	88
35	32	563	3	R 3	F	1959	1892	256	32.0	30.9	218	204	135	53.2	169	736	67
35	32	564	3	R 3	F	1646	1568	210	21.7	21.3	185	154	121	55.8	144	624	78
35	33	565	2	C	M	1949	1865	310	23.4	25.2	236	186	158	58.2	138	704	84
35	33	566	2	C	M	1981	1912	350	13.1	28.8	221	182	147	88.7	140	690	69
35	34	567	3	R 7	F	1741	1623	225	20.5	23.1	202	165	129	59.6	122	670	118
35	34	568	3	R 7	F	1655	1647	253	26.7	23.3	196	145	122	50.3	144	599	8
35	35	569	1	H	M	1799	1738	303	16.9	26.4	183	156	145	53.9	107	658	61
35	35	570	1	H	M	1971	1873	337	16.1	21.6	221	182	153	45.8	178	667	98
35	36	571	3	C	F	1788	1694	279	16.8	21.2	210	172	154	47.1	116	643	94
35	36	572	3	C	F	1701	1612	287	22.8	23.7	177	148	128	63.8	119	623	89
35	37	573	3	R 3	M	1971	1877	260	15.5	36.0	218	182	156	54.7	129	784	94
35	37	574	3	R 3	M	1885	1821	264	22.5	30.9	210	197	152	51.2	144	707	64
35	38	575	3	R 7	F	2136	2069	306	25.0	30.7	244	229	159	64.4	192	768	67
35	38	576	3	R 7	F	1737	1657	251	22.3	34.2	185	163	143	51.6	153	628	80
35	39	577	2	H	M	2234	2161	410	36.3	27.8	264	213	181	53.3	127	769	73
35	39	578	2	H	M	2142	2085	350	24.3	29.9	238	210	176	70.2	149	764	57
35	40	579	1	R 7	F	2123	2008	303	18.4	32.2	218	198	168	66.0	163	830	115
35	40	580	1	R 7	F	1943	1868	299	22.9	31.4	214	162	136	63.8	150	741	75
35	41	581	3	R 7	M	2147	2070	294	23.0	29.2	257	203	173	57.6	156	807	77
35	41	582	3	R 7	M	1702	1647	243	17.5	22.7	195	194	124	43.3	134	614	55
35	42	583	2	C	F	1971	1900	415	25.4	31.1	225	177	146	80.0	116	657	71
35	42	584	2	C	F	1635	1550	277	13.9	26.0	178	170	130	48.2	106	567	85
35	43	585	1	C	M	2080	1990	361	18.3	26.7	246	196	175	70.5	141	735	90
35	43	586	1	C	M	2432	2325	475	33.8	33.2	272	220	200	61.7	120	859	107
35	44	587	3	H	F	2017	1941	353	12.5	36.2	224	169	158	53.8	159	716	76
35	44	588	3	H	F	1953	1890	325	24.8	21.7	206	168	154	55.9	158	693	63
35	45	589	2	R 3	M	2116	2012	368	16.8	36.9	240	188	172	47.3	134	753	104
35	45	590	2	R 3	M	1868	1804	256	14.1	28.9	230	183	142	52.0	148	700	64
35	46	591	3	R 3	F	1798	1705	245	9.4	29.4	223	154	146	45.3	133	676	93
35	46	592	3	R 3	F	1678	1610	227	20.7	22.9	187	149	136	53.2	138	641	68
35	47	593	3	C	M	1749	1682	312	25.1	24.3	203	159	132	52.7	105	626	67
35	47	594	3	C	M	1945	1878	312	21.4	26.0	242	184	150	59.3	137	705	67
35	48	595	2	R 3	F	1729	1654	268	18.1	24.3	194	163	137	55.7	151	608	75
35	48	596	2	R 3	F	1888	1805	299	24.4	24.6	216	185	146	53.7	138	669	83
42	1	601	2	R 7	M	2849	2746	431	34.8	36.7	303	289	206	57.7	236	1021	103
42	1	602	2	R 7	M	3133	3019	518	21.6	44.3	354	290	227	59.9	283	1141	114
42	2	603	3	C	F	2738	2617	526	36.4	40.8	321	236	210	64.6	158	978	121
42	2	604	3	C	F	2758	2571	549	32.7	32.0	329	236	200	59.2	159	916	187
42	3	605	2	C	M	2867	2746	548	23.2	37.1	283	281	213	56.9	164	1051	121
42	3	606	2	C	M	2918	2825	609	39.2	39.0	335	285	212	67.6	179	1004	93
42	4	607	1	R 3	F	2529	2400	377	19.7	40.2	312	255	199	67.2	226	862	129
42	4	608	1	R 3	F	2678	2554	455	31.0	30.6	335	220	192	54.3	217	976	124
42	5	609	3	H	M	2416	2300	407	24.4	29.0	271	223	189	59.4	211	859	116

42	5	610	3	H	M	2688	2545	421	35.1	37.2	317	257	198	59.7	176	953	143
42	6	611	1	C	F	3376	3176	622	25.8	36.1	387	295	239	65.2	277	1168	200
42	6	612	1	C	F	2533	2420	501	19.2	37.1	271	215	178	60.4	159	918	113
42	7	613	1	R 3	M	3286	3162	541	26.0	41.4	374	348	238	74.2	244	1230	124
42	7	614	1	R 3	M	3115	2992	481	30.8	41.2	344	295	229	71.8	272	1141	123
42	8	615	2	H	F	2362	2234	439	18.2	38.5	246	212	177	50.6	163	845	128
42	8	616	2	H	F	2371	2260	415	28.3	25.7	289	236	170	48.8	144	831	111
42	9	617	1	H	M	2957	2803	471	36.4	34.3	344	269	234	71.0	183	1100	154
42	9	618	1	H	M	3112	2941	613	21.3	40.0	329	292	235	65.7	213	1072	171
42	10	619	2	R 7	F	2193	2065	351	29.8	27.6	238	210	156	50.8	169	767	128
42	10	620	2	R 7	F	2073	1945	338	19.6	26.4	240	177	158	40.3	130	769	128
42	11	621	1	R 7	M	3186	3068	513	29.4	36.7	396	310	223	62.0	308	1144	118
42	11	622	1	R 7	M	2734	2577	442	30.1	40.2	269	285	195	61.8	262	890	157
42	12	623	1	H	F	1989	1865	387	29.8	27.9	236	212	152	53.5	86.22	658	124
42	12	624	1	H	F	2351	2248	444	16.7	30.4	280	225	180	43.1	141	840	103
42	13	625	3	C	M	2029	1932	392	23.0	26.1	239	191	167	44.6	88.04	742	97
42	13	626	3	C	M	2405	2278	423	19.9	30.1	282	202	168	41.4	171	859	127
42	14	627	1	C	F	2276	2140	387	20.3	29.8	262	201	180	41.9	133	806	136
42	14	628	1	C	F	2420	2317	397	32.8	26.0	280	214	188	52.6	190	868	103
42	15	629	1	R 7	M	2541	2349	402	30.4	45.3	269	260	194	72.3	191	864	192
42	15	630	1	R 7	M	2713	2580	450	33.8	31.2	285	247	200	56.7	245	931	133
42	16	631	1	R 3	F	2683	2571	462	33.5	31.8	308	255	208	57.0	185	952	112
42	16	632	1	R 3	F	2234	2140	346	30.6	29.0	255	203	176	46.8	181	819	94
42	17	633	2	R 7	M	2502	2402	358	27.0	28.6	292	242	179	61.9	176	956	100
42	17	634	2	R 7	M	2483	2398	361	16.3	44.4	285	257	200	49.7	208	914	85
42	18	635	2	R 7	F	2568	2450	398	24.6	27.7	296	258	217	56.8	214	905	118
42	18	636	2	R 7	F	2088	1958	306	31.0	30.3	228	197	148	57.3	206	728	130
42	19	637	1	C	M	2258	2160	419	22.0	29.5	263	238	184	73.3	115	800	98
42	19	638	1	C	M	1808	1735	334	21.0	37.4	184	175	135	89.6	66.2	658	73
42	20	639	2	H	F	2319	2293	460	33.0	27.6	267	218	200	58.6	156	857	26
42	20	640	2	H	F	2091	2003	382	25.0	26.4	230	181	168	46.4	202	738	88
42	21	641	3	H	M	2576	2461	416	20.5	39.5	306	247	190	59.4	151	971	115
42	21	642	3	H	M	2643	2548	416	40.1	34.0	316	272	192	67.6	153	995	95
42	22	643	2	R 3	F	2912	2812	502	36.3	39.5	343	326	201	61.4	211	1007	100
42	22	644	2	R 3	F	2253	2095	401	24.1	30.4	251	220	143	51.9	197	723	158
42	23	645	2	R 3	M	2209	2116	298	20.6	37.5	259	241	172	45.0	163	839	93
42	23	646	2	R 3	M	3056	2949	477	20.8	39.5	344	307	212	61.4	263	1103	107
42	24	647	1	H	F	2322	2239	375	21.9	34.4	276	215	180	70.2	171	853	83
42	24	648	1	H	F	1397	1281	260	18.2	19.0	158	146	116	41.4	56	472	116
42	25	649	1	R 3	M	2911	2794	473	29.2	32.9	372	303	207	66.0	262	992	117
42	25	650	1	R 3	M	3294	3158	493	23.0	49.2	389	319	250	78.4	196	1234	136
42	26	651	1	R 7	F	2377	2256	376	22.4	27.3	274	209	189	60.3	188	861	121
42	26	652	1	R 7	F	2631	2505	417	19.2	36.5	306	244	205	59.0	225	908	126
42	27	653	3	R 3	M	2613	2433	360	17.4	30.4	310	223	197	77.1	188	962	180
42	27	654	3	R 3	M	3161	3011	445	30.5	37.3	416	364	248	73.2	163	1166	150

42	28	655	3	H	F	2174	2014	396	24.8	23.4	229	195	161	48.8	131	765	160
42	28	656	3	H	F	2017	1932	320	33.2	32.2	237	171	159	47.2	154	733	85
42	29	657	3	R 7	M	2570	2452	373	30.3	27.8	304	257	204	58.2	183	971	118
42	29	658	3	R 7	M	2410	2310	256	29.5	25.7	258	249	194	54.8	181	974	100
42	30	659	2	C	F	2502	2324	430	18.6	38.7	267	212	174	56.9	203	865	178
42	30	660	2	C	F	2242	2106										136
42	31	661	2	H	M	2798	2645	444	20.5	36.1	299	282	196	67.0	182	1061	153
42	31	662	2	H	M	2863	2718	525	38.7	36.1	327	281	170	53.2	159	880	145
42	32	663	3	R 3	F	1950	1803	278	17.6	32.5	230	178	143	43.9	146	684	147
42	32	664	3	R 3	F	1984	1890	302	32.4	29.9	220	199	150	45.4	149	718	94
42	33	665	2	C	M	2544	2455	412	21.3	33.1	289	238	174	59.9	144	941	89
42	33	666	2	C	M	2942	2792	530	32.9	44.9	313	293	217	68.3	193	1041	150
42	34	667	3	R 7	F	2439	2332	351	20.9	25.9	292	230	178	62.8	214	916	107
42	34	668	3	R 7	F	2024	1892	334	21.6	26.2	238	217	152	46.4	151	662	132
42	35	669	1	H	M	2822	2690	503	26.1	33.1	331	253	218	73.2	194	977	132
42	35	670	1	H	M	3122	2996	631	38.0	35.0	352	279	232	61.9	206	1055	126
42	36	671	3	C	F	2274	2188	353	16.1	33.3	258	201	185	52.0	207	811	86
42	36	672	3	C	F	2460	2325	417	30.8	26.5	313	213	182	58.4	153	880	135
42	37	673	3	R 3	M	1927	1841	303	21.0	33.6	203	197	142	53.3	167	673	86
42	37	674	3	R 3	M	1930	1852	246	18.1	27.9	224	184	148	98.8	100	770	78
42	38	675	3	R 7	F	2101	1957	305	14.5	34.6	227	202	165	56.8	166	749	144
42	38	676	3	R 7	F	2228	2119	343	19.7	26.1	251	190	166	59.5	172	803	109
42	39	677	2	H	M	2992	2865	502	41.8	37.1	303	281	200	90.0	257	991	127
42	39	678	2	H	M	2065	1943	384	16.9	28.6	216	189	153	52.7	137	722	122
42	40	679	1	R 7	F	2194	2101	373	16.8	32.2	249	234	163	47.7	168	769	93
42	40	680	1	R 7	F	2574	2474	462	24.0	27.8	293	246	202	59.1	166	913	100
42	41	681	3	R 7	M	2548	2401	347	19.1	30.2	292	256	197	65.5	178	941	147
42	41	682	3	R 7	M	1400	1355	186	21.3	29.4	153	140	121	92.7	61.7	525	45
42	42	683	2	C	F	2427	2297	463	35.4	32.4	267	225	187	58.5	136	868	130
42	42	684	2	C	F	1240	1178	186	18.1	18.4	142	118	116	31.1	45.8	479	62
42	43	685	1	C	M	2217	2101	358	19.8	29.9	240	211	178	61.3	151	792	116
42	43	686	1	C	M	2635	2490	427	26.3	34.5	274	252	182	74.1	177	957	145
42	44	687	3	H	F	2240	2080	335	34.1	25.6	253	183	165	56.6	190	815	160
42	44	688	3	H	F	1851	1775	300	23.3	21.3	202	175	150	49.4	136	676	76
42	45	689	2	R 3	M	2332	2177	300	29.8	35.4	243	253	172	53.7	167	868	155
42	45	690	2	R 3	M	2516	2396	428	26.1	29.1	263	238	199	56.3	184	928	120
42	46	691	3	R 3	F	2167	2047	379	30.9	30.3	221	205	150	51.1	155	719	120
42	46	692	3	R 3	F	2479	2291	413	29.5	23.2	270	229	192	55.1	188	845	188
42	47	693	3	C	M	2284	2190	351	24.3	29.6	274	198	170	53.2	159	880	94
42	47	694	3	C	M	2510	2409	378	33.1	37.2	255	207	167	84.6	96.3	953	101
42	48	695	2	R 3	F	2306	2162	356	29.0	31.0	235	212	161	54.9	258	774	144
42	48	696	2	R 3	F	2563	2414	462	41.4	37.9	297	239	175	64.0	222	828	149
56	1	801	2	R 7	M	4593	4407	878	54.7	60.0	588	482	365	104	334	1435	186
56	1	802	2	R 7	M	4267	4107	755	30.4	53.0	463	470	318	90.5	304	1533	160
56	2	803	3	C	F	3590	3408	718	59.3	46.3	426	310	266	75.7	215	1197	182

56	2	804	3	C	F	3253	3140	622	47.4	44.8	312	315	257	90.9	151	1197	113
56	3	805	2	C	M	4763	4563	939	79.8	59.4	544	445	368	101	249	1644	200
56	3	806	2	C	M	4772	4497	964	42.7	62.5	515	446	344	97.7	289	1672	275
56	4	807	1	R 3	F	3546	3346	635	53.7	38.1	409	321	261	74.0	258	1196	200
56	4	808	1	R 3	F	3738	3563	691	54.9	57.5	445	349	263	61.6	328	1230	175
56	5	809	3	H	M	4001	3822	677	49.1	73.2	428	377	336	82.2	197	1500	179
56	5	810	3	H	M	4255	4074	851	60.1	64.1	482	455	310	92.4	214	1438	181
56	6	811	1	C	F	3350	3167	685	29.7	45.6	387	300	245	76.1	236	1078	183
56	6	812	1	C	F	3507	3331	736	45.8	27.8	368	273	266	66.5	258	1215	176
56	7	813	1	R 3	M	4226	4058	675	44.1	54.7	469	420	294	98.5	415	1447	168
56	7	814	1	R 3	M	4798	4578	925	68.5	78.2	572	471	331	71.7	354	1583	220
56	8	815	2	H	F	3641	3425	755	44.8	55.6	430	334	275	62.2	178	1219	216
56	8	816	2	H	F	3214	3052	657	51.6	49.0	332	300	219	68.6	230	1080	162
56	9	817	1	H	M	4188	4026	849	62.6	60.4	450	382	310	71.3	226	1463	162
56	9	818	1	H	M	3991	3876	795	35.0	58.0	442	370	288	78.2	353	1310	115
56	10	819	2	R 7	F	3156	2982	536	40.8	45.6	358	309	234	60.6	218	1089	174
56	10	820	2	R 7	F	3405	3228	572	35.8	48.2	360	290	254	77.4	381	1162	177
56	11	821	1	R 7	M	4446	4266	805	46.6	59.7	535	484	343	65.2	281	1539	180
56	11	822	1	R 7	M	4319	4097	742	83.2	54.2	472	446	308	65.5	314	1523	222
56	12	823	1	H	F	3277	3086	642	56.9	42.2	394	287	255	71.2	199	1077	191
56	12	824	1	H	F	3287	3115	757	38.5	46.6	348	311	235	66.6	239	999	172
56	13	825	3	C	M	3805	3645	645	31.4	43.9	459	376	276	70.4	286	1331	160
56	13	826	3	C	M	4292	4133	819	40.4	45.9	536	401	300	81.0	299	1462	159
56	14	827	1	C	F	3358	3219	727	55.1	49.3	427	308	265	65.3	135	1106	139
56	14	828	1	C	F	3409	3266	766	50.0	43.7	362	294	257	59.7	204	1144	143
56	15	829	1	R 7	M	4551	4426	952	54.4	66.8	518	452	301	79.9	404	1496	125
56	15	830	1	R 7	M	3979	3797	656	62.8	68.0	410	402	304	86.7	311	1406	182
56	16	831	1	R 3	F	3580	3454	667	40.0	56.8	396	313	254	68.9	356	1227	126
56	16	832	1	R 3	F	3483	3253	567	45.1	53.8	441	295	242	73.9	317	1208	230
56	17	833	2	R 7	M	3818	3659	640	28.4	52.3	430	372	294	78.7	345	1375	159
56	17	834	2	R 7	M	4093	3915	696	31.7	68.7	452	423	317	83.9	229	1459	178
56	18	835	2	R 7	F	3463	3305	580	37.2	44.8	393	365	245	76.1	348	1128	158
56	18	836	2	R 7	F	3286	3083	557	34.6	45.2	348	315	253	69.6	274	1087	203
56	19	837	1	C	M	4479	4252	877	44.1	54.8	500	474	349	93.6	328	1443	227
56	19	838	1	C	M	4125	3974	842	36.9	55.3	437	422	319	80.3	287	1396	151
56	20	839	2	H	F	3810	3612	880	44.4	38.2	467	330	276	63.4	214	1237	198
56	20	840	2	H	F	2962	2812	521	24.7	39.7	325	286	239	53.2	231	1003	150
56	21	841	3	H	M	4257	4090	833	57.3	56.2	494	422	303	78.6	227	1570	167
56	21	842	3	H	M	3852	3676	628	46.8	48.2	457	379	294	57.9	202	1461	176
56	22	843	2	R 3	F	3148	2996	603	43.7	41.1	334	304	216	63.4	285	1052	152
56	22	844	2	R 3	F	3348	3193	566	47.1	44.1	379	320	240	75.4	290	1149	155
56	23	845	2	R 3	M	4284	4035	707	53.1	50.0	519	454	302	72.0	266	1497	249
56	23	846	2	R 3	M	4444	4243	791	52.1	70.1	474	409	307	91.0	366	1570	201
56	24	847	1	H	F	3301	3111	660	56.0	41.2	375	295	229	57.6	191	1199	190
56	24	848	1	H	F	3394	3224	688	27.1	41.5	366	292	232	76.0	199	1196	170

56	25	849	1	R 3	M	4162	3989	682	38.2	56.7	468	446	304	97.7	312	1438	173
56	25	850	1	R 3	M	4092	3834	663	45.9	67.8	398	435	305	78.9	289	1542	258
56	26	851	1	R 7	F	3196	3029	537	48.8	35.8	361	295	234	88.8	257	1041	167
56	26	852	1	R 7	F	3264	3085	563	40.2	49.6	401	325	245	60.6	274	1049	179
56	27	853	3	R 3	M	4077	3915	629	50.7	66.6	504	428	284	71.9	305	1462	162
56	27	854	3	R 3	M	4294	4061	614	57.7	62.0	530	448	315	76.3	306	1575	233
56	28	855	3	H	F	3336	3191	610	46.5	38.8	407	310	249	68.8	224	1133	145
56	28	856	3	H	F	3317	3137	610	48.0	42.7	325	285	247	63.3	193	1210	180
56	29	857	3	R 7	M	4163	4018	684	48.7	70.9	506	444	299	89.9	226	1545	145
56	29	858	3	R 7	M	4312	4159	676	54.6	53.8	496	460	311	88.5	354	1565	153
56	30	859	2	C	F	3893	3671	872	68.3	49.7	493	339	266	71.9	210	1223	222
56	30	860	2	C	F	3263	3107	656	34.9	37.2	375	297	249	68.5	195	1157	156
56	31	861	2	H	M	3971	3813	851	67.7	47.4	409	365	298	77.8	185	1411	158
56	31	862	2	H	M	4083	3933	867	26.4	58.5	441	395	282	101	348	1362	150
56	32	863	3	R 3	F	3056	2917	405	39.3	67.3	345	290	235	61.0	204	1187	139
56	32	864	3	R 3	F	3393	3273	579	46.8	44.8	398	313	242	70.1	278	1226	120
56	33	865	2	C	M	4297	4208	865	58.9	62.5	577	431	338	75.6	275	1455	89
56	33	866	2	C	M	3755	3582	594	41.5	62.4	433	346	291	82.0	309	1330	173
56	34	867	3	R 7	F	3361	3127	538	52.9	39.1	393	322	268	66.8	237	1166	234
56	34	868	3	R 7	F	2634	2506	446	39.2	34.2	275	248	231	59.7	168	941	128
56	35	869	1	H	M	4173	4026	800	36.7	47.6	481	421	327	80.5	330	1421	147
56	35	870	1	H	M	4214	4032	892	49.2	61.7	490	406	300	78.5	316	1369	182
56	36	871	3	C	F	3433	3279	629	56.1	42.1	384	323	253	72.0	154	1272	154
56	36	872	3	C	F	3394	3236	672	50.0	45.6	391	279	231	78.1	192	1207	158
56	37	873	3	R 3	M	3855	3689	623	60.9	59.0	409	376	295	80.9	240	1413	166
56	37	874	3	R 3	M	3819	3591	608	39.5	49.8	430	370	292	63.7	257	1401	228
56	38	875	3	R 7	F	3663	3476	614	65.9	50.5	419	371	270	86.6	209	1273	187
56	38	876	3	R 7	F	2984	2703	442	41.5	34.2	336	291	194	61.6	249	1012	281
56	39	877	2	H	M	4413	4172	816	51.3	72.6	468	400	315	73.7	299	1596	241
56	39	878	2	H	M	4216	3954	798	48.0	41.2	505	409	333	75.1	256	1416	262
56	40	879	1	R 7	F	3368	3218	630	43.5	41.3	366	307	224	70.5	374	1092	150
56	40	880	1	R 7	F	3512	3318	639	52.5	34.2	403	299	243	86.2	206	1288	194
56	41	881	3	R 7	M	4712	4537	762	48.6	84.2	504	508	338	89.6	338	1715	175
56	41	882	3	R 7	M	4150	3970	746	59.1	56.2	507	413	286	84.2	283	1443	180
56	42	883	2	C	F	3279	3127	650	25.6	41.0	400	295	235	62.6	246	1103	152
56	42	884	2	C	F	3388	3202	742	47.5	32.2	365	314	252	52.1	288	1013	186
56	43	885	1	C	M	4298	4091	928	43.4	47.9	521	461	321	80.7	280	1337	207
56	43	886	1	C	M	4385	4226	812	66.1	68.8	480	403	360	80.6	320	1405	159
56	44	887	3	H	F	2992	2569	512	35.3	33.8	283	239	210	56.9	147	983	423
56	44	888	3	H	F	2881	2695	644	34.4	42.8	299	273	214	56.8	175	891	186
56	45	889	2	R 3	M	3753	3580	635	47.4	49.7	432	398	259	75.5	324	1291	173
56	45	890	2	R 3	M	3598	3473	606	26.8	65.9	393	383	272	75.1	262	1325	125
56	46	891	3	R 3	F	3322	3156	607	43.1	53.6	358	296	267	74.7	239	1174	166
56	46	892	3	R 3	F	3898	3734	707	65.3	54.7	466	406	271	76.6	277	1329	164
56	47	893	3	C	M	3801	3620	639	53.3	43.0	436	336	261	85.9	212	1420	181

56	47	894	3	C	M	4895	4694	1162	53.4	66.3	529	444	247	95.3	240	1657	201
56	48	895	2	R 3	F	2952	2761	545	35.9	39.1	321	271	198	60.6	244	966	191
56	48	896	2	R 3	F	3100	2940	552	29.1	43.6	351	269	235	73.3	205	1122	160
70	1	1001	2	R 7	M	4579	4289	685	34.8	59.6	491	443	323	81.4	412	1649	290
70	1	1002	2	R 7	M	5879	5583	1208	47.9	71.3	724	555	414	96.4	452	1941	296
70	2	1003	3	C	F	4534	4325	863	71.2	50.2	535	415	301	109	237	1655	209
70	2	1004	3	C	F	4487	4265	1050	68.3	55.1	528	398	321	96.2	198	1505	222
70	3	1005	2	C	M	4748	4461	970	55.2	86.0	567	486	372	71.0	172	1607	287
70	3	1006	2	C	M	5426	5183	1172	66.7	60.7	642	550	385	75.1	345	1798	243
70	4	1007	1	R 3	F	3485	3280	517	42.2	52.9	361	301	283	79.3	335	1249	205
70	4	1008	1	R 3	F	3638	3338	783	50.5	55.5	403	378	267	57.7	276	1087	300
70	5	1009	3	H	M	5442	5253	1042	74.5	57.1	709	527	398	78.4	270	1949	189
70	5	1010	3	H	M	5536	5245	1262	78.4	82.6	668	515	387	93.9	332	1770	291
70	6	1011	1	C	F	4299	4122	930	83.9	58.4	486	352	284	87.8	219	1535	177
70	6	1012	1	C	F	4024	3864	942	50.3	58.4	437	391	298	61.5	361	1215	160
70	7	1013	1	R 3	M	5357	5083	1004	53.3	66.2	581	552	405	86.4	391	1846	274
70	7	1014	1	R 3	M	4672	4439	955	62.3	82.3	571	476	324	141	189	1610	233
70	8	1015	2	H	F	4443	4197	878	54.1	53.4	506	443	304	67.9	297	1498	246
70	8	1016	2	H	F	4691	4496	1013	81.3	45.9	563	449	320	85.6	307	1550	195
70	9	1017	1	H	M	5705	5446	1333	66.9	65.4	716	623	427	81.7	235	1830	259
70	9	1018	1	H	M	5343	5133	1059	67.4	57.5	619	536	407	90.4	339	1878	210
70	10	1019	2	R 7	F	4207	4007	799	65.5	48.8	446	386	287	84.2	332	1518	200
70	10	1020	2	R 7	F	4777	4595	843	57.4	48.6	554	473	339	91.2	304	1829	182
70	11	1021	1	R 7	M	4810	4590	932	47.3	66.9	498	577	385	101	402	1553	220
70	11	1022	1	R 7	M	5395	5152	1035	61.3	75.7	588	536	400	82.0	325	1914	243
70	12	1023	1	H	F	4584	4328	1077	59.3	56.8	479	406	300	89.6	295	1486	256
70	12	1024	1	H	F	4141	3973	922	76.7	61.6	466	340	281	71.3	221	1432	168
70	13	1025	3	C	M	4944	4739	693	46.0	59.8	578	427	332	77.7	368	1620	205
70	13	1026	3	C	M	5356	5100	1214	35.9	66.8	610	476	402	86.6	391	1741	256
70	14	1027	1	C	F	4345	4094	914	45.2	60.8	485	403	340	74.4	274	1424	251
70	14	1028	1	C	F	3684	3492	767	58.3	40.3	368	381	281	64.3	216	1275	192
70	15	1029	1	R 7	M	5043	4808	803	56.7	60.1	563	526	404	85.8	352	1738	235
70	15	1030	1	R 7	M	5476	5202	1087	38.2	69.3	630	563	401	82.2	371	1910	274
70	16	1031	1	R 3	F	3231	3018	588	24.2	40.9	342	316	240	55.3	212	1106	213
70	16	1032	1	R 3	F	4040	3784	730	58.7	51.5	442	338	274	74.5	376	1362	256
70	17	1033	2	R 7	M	4983	4774	916	55.5	76.8	550	579	368	95.8	345	1708	209
70	17	1034	2	R 7	M	5182	4908	911	61.6	82.7	609	616	372	77.9	258	1843	274
70	18	1035	2	R 7	F	4074	3875	617	45.2	36.5	511	489	324	73.4	291	1415	199
70	18	1036	2	R 7	F	3920	3695	775	73.7	51.2	472	363	260	71.1	319	1241	225
70	19	1037	1	C	M	5628	5379	1056	86.2	60.4	704	501	411	85.0	332	2035	249
70	19	1038	1	C	M	3422	3268	741	32.2	61.7	469	372	304	65.3	68.42	1115	154
70	20	1039	2	H	F	3837	3616	828	40.0	41.8	407	356	320	54.6	242	1282	221
70	20	1040	2	H	F	4377	4130	965	8.2	54.6	508	366	290	90.6	267	1406	247
70	21	1041	3	H	M	5122	4885	886	35.0	68.9	649	475	403	91.8	271	1918	237
70	21	1042	3	H	M	5707	5229	1233	100	85.4	757	558	410	97.3	244	1964	478

70	22	1043	2	R 3	F	4184	3901	766	80.1	55.6	429	387	294	78.1	362	1383	283
70	22	1044	2	R 3	F	4339	4095	839	76.3	43.9	473	405	284	87.2	270	1522	244
70	23	1045	2	R 3	M	6008	5660	1102	44.2	75.8	687	582	403	102	499	2036	348
70	23	1046	2	R 3	M	5277	4953	966	55.1	85.4	539	557	416	88.8	294	1853	324
70	24	1047	1	H	F	4017	3813	763	31.7	39.8	450	337	291	87.1	241	1435	204
70	24	1048	1	H	F	4122	3907	954	62.4	42.9	436	418	310	68.6	172	1373	215
70	25	1049	1	R 3	M	3331	3198	531	32.3	54.8	387	379	296	95.0	112	1261	133
70	25	1050	1	R 3	M	5381	5176	1026	71.9	84.1	585	626	412	85.6	381	1820	205
70	26	1051	1	R 7	F	3934	3646	689	59.4	55.4	406	325	265	85.4	392	1278	288
70	26	1052	1	R 7	F	4291	3987	794	54.6	64.2	436	389	294	72.2	278	1456	304
70	27	1053	3	R 3	M	5940	5653	1036	79.9	64.5	688	664	427	119	319	2168	287
70	27	1054	3	R 3	M	5999	5779	1242	15.5	95.4	747	637	392	91.5	432	1973	220
70	28	1055	3	H	F	3675	3428	742	52.9	49.3	373	322	285	62.9	297	1157	247
70	28	1056	3	H	F	4178	3897	824	64.5	60.3	468	393	387	76.0	275	1349	281
70	29	1057	3	R 7	M	5451	5182	995	55.2	61.2	636	518	383	85.5	242	2088	269
70	29	1058	3	R 7	M	5580	5303	836	68.5	63.0	695	545	386	131	403	2086	277
70	30	1059	2	C	F	3801	3584	730	48.1	48.2	413	339	275	60.3	306	1287	217
70	30	1060	2	C	F	4222	3975	898	79.7	52.4	441	349	290	74.6	256	1447	247
70	31	1061	2	H	M	5204	5031	1049	50.4	56.8	591	458	385	96.2	309	1917	173
70	31	1062	2	H	M	5583	5405	1231	59.4	89.7	687	544	383	74.9	447	1781	178
70	32	1063	3	R 3	F	4414	4128	788	18.8	51.6	432	368	299	84.3	423	1579	286
70	32	1064	3	R 3	F	4237	3973	704	74.6	43.0	517	444	307	69.7	293	1447	264
70	33	1065	2	C	M	4746	4539	1165	49.1	76.2	545	476	379	68.6	173	1568	207
70	33	1066	2	C	M	4566	4312	964	45.4	53.5	539	461	351	67.4	209	1538	254
70	34	1067	3	R 7	F	4160	3870	771	31.2	39.3	425	392	283	86.2	374	1414	290
70	34	1068	3	R 7	F	3985	3780	715	27.9	53.0	432	366	295	79.4	309	1437	205
70	35	1069	1	H	M	5271	4992	1040	37.9	70.9	595	515	385	99.5	215	1899	279
70	35	1070	1	H	M	5692	5387	1269	64.5	82.1	616	516	400	103	379	1764	305
70	36	1071	3	C	F	3111	2896	627	41.8	31.4	339	274	217	44.6	227	1042	215
70	36	1072	3	C	F	4251	3993	778	22.7	46.0	479	334	272	79.7	291	1518	258
70	37	1073	3	R 3	M	5089	4840	778	70.3	91.6	529	513	358	107	443	1817	249
70	37	1074	3	R 3	M	4894	4660	781	69.1	58.7	614	491	377	98.5	337	1769	234
70	38	1075	3	R 7	F	4125	3849	695	24.7	54.5	420	302	262	57.8	370	1539	276
70	38	1076	3	R 7	F	4541	4329	798	38.1	50.3	493	399	313	87.3	339	1731	212
70	39	1077	2	H	M	5179	4858	1008	71.6	77.7	633	527	369	78.9	225	1734	321
70	39	1078	2	H	M	5513	5203	1170	70.1	77.2	657	570	376	96.0	338	1684	310
70	40	1079	1	R 7	F	3716	3498	669	50.8	39.7	362	319	256	71.7	332	1332	218
70	40	1080	1	R 7	F	4611	4283	765	65.1	65.8	527	395	318	80.4	364	1574	328
70	41	1081	3	R 7	M	4576	4387	852	64.9	70.5	560	474	322	89.4	362	1542	189
70	41	1082	3	R 7	M	5681	5436	878	110	72.8	682	611	445	77.9	295	2205	245
70	42	1083	2	C	F	4541	4354	1176	66.7	54.4	521	402	275	79.9	357	1443	187
70	42	1084	2	C	F	4092	3937	872	70.9	53.2	461	413	296	70.0	209	1419	155
70	43	1085	1	C	M	4845	4584	1252	47.0	59.3	587	516	380	105	99.73	1483	261
70	43	1086	1	C	M	5412	5080	890	26.4	58.8	503	488	380	80.4	269	1722	332
70	44	1087	3	H	F	4503	4214	978	76.0	60.7	537	418	331	69.0	232	1416	289

70	44	1088	3	H	F	3867	3613	726	60.8	60.7	394	347	281	64.7	237	1336	254
70	45	1089	2	R 3	M	5543	5213	933	57.8	58.9	667	608	405	97.8	415	1809	330
70	45	1090	2	R 3	M	4926	4667	928	50.7	57.9	555	463	352	90.9	377	1659	259
70	46	1091	3	R 3	F	4296	4051	791	85.3	39.2	526	386	290	73.0	241	1572	245
70	46	1092	3	R 3	F	4678	4363	845	81.8	44.7	521	481	327	116	300	1582	315
70	47	1093	3	C	M	5426	5119	1212	67.7	50.8	624	473	335	87.9	400	1656	307
70	47	1094	3	C	M	5647	5410	1179	74.2	79.4	778	549	380	101	280	1892	237
70	48	1095	2	R 3	F	3570	3310	652	21.4	42.6	406	325	254	74.5	302	1193	260
70	48	1096	2	R 3	F	4751	4554	1062	58.6	49.8	501	496	325	85.8	234	1667	197
84	1	1201	2	R 7	M	5491	5289	926	31.5	76.9	605	584	439	82.6	394	2048	202
84	1	1202	2	R 7	M	5872	5619	1113	69.7	77.5	626	603	452	102	475	2002	253
84	2	1203	3	C	F	4869	4580	1010	61.7	46.0	559	382	359	125	244	1701	289
84	2	1204	3	C	F	4900	4701	1045	98.6	58.4	917	428	333	85.6	297	1654	199
84	3	1205	2	C	M	5150	4894	1094	67.7	83.3	749	504	355	98.5	178	1732	256
84	3	1206	2	C	M	5835	5595	1251	73.4	84.1	717	585	403	93.2	372	1963	240
84	4	1207	1	R 3	F	2728	2630	529	24.7	39.5	317	310	168	39.2	125	976	98
84	4	1208	1	R 3	F	5117	4800	1170	48.5	52.6	486	487	267	98.0	384	1692	317
84	5	1209	3	H	M	6795	6524	1351	98.4	75.7	756	694	436	106	288	2504	271
84	5	1210	3	H	M	7000	6785	1832	110	99.2	919	675	498	90.5	319	2124	215
84	6	1211	1	C	F	5271	5188	1289	63.6	55.6	658	455	404	66.2	227	1786	83
84	6	1212	1	C	F	5339	5126	1183	87.6	41.4	682	430	372	98.5	345	1795	213
84	7	1213	1	R 3	M	6048	5781	1369	68.9	61.5	661	603	434	85.0	385	1834	267
84	7	1214	1	R 3	M	6958	6693	1478	95.3	105	930	762	507	115	446	2214	265
84	8	1215	2	H	F	5441	5219	1230	95.3	45.6	519	528	370	111	381	1839	222
84	8	1216	2	H	F	4845	4663	989	54.9	51.3	579	494	348	74.0	261	1680	182
84	9	1217	1	H	M	6673	6399	1476	87.2	70.7	814	672	479	95.6	377	2188	274
84	9	1218	1	H	M	5548	5311	1076	72.6	73.0	729	600	415	107	242	1878	237
84	10	1219	2	R 7	F	4909	4716	906	50.3	40.9	512	419	345	76.2	364	1872	193
84	10	1220	2	R 7	F	5419	5167	937	98.4	52.4	532	537	373	112	360	2032	252
84	11	1221	1	R 7	M	6225	5991	1315	76.8	85.9	646	600	442	82.1	491	2062	234
84	11	1222	1	R 7	M	5340	5064	999	84.6	94.8	591	606	452	101.0	184	1954	276
84	12	1223	1	H	F	4735	4551	988	84.0	47.0	532	398	319	91.3	280	1754	184
84	12	1224	1	H	F	5471	5144	1364	82.0	49.7	598	440	382	93.8	374	1648	327
84	13	1225	3	C	M	5928	5647	1094	70.1	73.4	732	560	414	105	473	1978	281
84	13	1226	3	C	M	5814	5519	1236	101	79.2	770	546	396	100	276	1991	295
84	14	1227	1	C	F	5167	4928	1166	39.6	62.9	636	411	366	83.3	303	1788	239
84	14	1228	1	C	F	5113	4850	1299	35.2	56.3	567	424	331	73.8	307	1611	263
84	15	1229	1	R 7	M	5811	5494	1155	81.6	95.5	698	572	399	110	443	1830	317
84	15	1230	1	R 7	M	6363	6062	1231	89.5	83.8	851	691	492	97.8	381	2023	301
84	16	1231	1	R 3	F	3803	3646	813	39.8	43.9	502	370	318	44.5	149	1293	157
84	16	1232	1	R 3	F	4962	4711	925	75.3	75.6	617	453	377	80.8	277	1763	251
84	17	1233	2	R 7	M	5692	5434	1242	33.4	55.1	732	540	426	68.3	355	1912	258
84	17	1234	2	R 7	M	5561	5352	1016	79.7	88.1	755	535	380	154	229	2029	209
84	18	1235	2	R 7	F	4747	4408	829	90.5	63.4	566	488	338	80.6	345	1544	339
84	18	1236	2	R 7	F	4546	4348	729	35.2	47.1	596	448	370	87.7	309	1679	198

84	19	1237	1	C	M	6599	6262	1439	68.9	72.3	850	664	519	120	458	1968	337
84	19	1238	1	C	M	6563	6311	1331	82.3	78.7	782	662	550	215	282	2234	252
84	20	1239	2	H	F	4293	4103	985	79.1	57.2	511	454	348	58.0	129	1439	190
84	20	1240	2	H	F	4820	4578	1001	75.6	42.8	619	445	350	66.3	214	1678	242
84	21	1241	3	H	M	6276	6051	1466	73.0	81.0	682	608	458	105	239	2222	225
84	21	1242	3	H	M	4071	3893	861	45.2	82.6	535	486	336	86.9	116	1303	178
84	22	1243	2	R 3	F	4763	4553	922	80.1	40.0	590	467	315	73.8	286	1676	210
84	22	1244	2	R 3	F	4911	4676	967	89.4	72.1	544	470	348	64.0	217	1812	235
84	23	1245	2	R 3	M	6343	6040	1189	59.5	107	937	645	470	94.0	340	2059	303
84	23	1246	2	R 3	M	6037	5711	1056	105	58.9	825	615	484	101	354	1958	326
84	24	1247	1	H	F	5195	4933	1248	94.8	63.0	639	404	343	83.3	260	1709	262
84	24	1248	1	H	F	5939	5689	1362	50.5	54.0	741	528	421	116	341	1867	250
84	25	1249	1	R 3	M	5252	5039	850	43.8	74.7	551	515	415	151	375	1959	213
84	25	1250	1	R 3	M	7048	6751	1641	83.2	100	673	665	463	97.4	430	2471	297
84	26	1251	1	R 7	F	5117	4821	853	75.8	73.8	608	472	374	82.7	399	1757	296
84	26	1252	1	R 7	F	5161	4967	1150	88.5	79.4	593	477	344	98.3	386	1680	194
84	27	1253	3	R 3	M	6873	6565	1307	94.7	105	870	682	539	105	476	2315	308
84	27	1254	3	R 3	M	6575	6307	1261	87.4	82.2	843	697	452	102	373	2336	268
84	28	1255	3	H	F	5021	4840	1031	73.7	41.7	547	494	366	61.9	279	1870	181
84	28	1256	3	H	F	4823	4629	1164	77.9	53.2	590	388	328	76.1	183	1718	194
84	29	1257	3	R 7	M	7098	6765	1244	76.4	78.4	805	762	519	112	472	2612	333
84	29	1258	3	R 7	M	6572	6299	1249	110	96.1	712	664	499	99.6	382	2414	273
84	30	1259	2	C	F	4687	4453	1005	27.0	50.8	546	482	388	63.6	265	1548	234
84	30	1260	2	C	F	4672	4444	1115	71.7	56.0	543	395	297	85.6	226	1559	228
84	31	1261	2	H	M	5656	5413	1133	65.6	96.5	630	481	428	115	433	1932	243
84	31	1262	2	H	M	5705	5467	1170	77.8	69.6	697	545	482	92.0	279	1902	238
84	32	1263	3	R 3	F	4982	4731	924	86.4	55.8	551	491	341	104	269	1781	251
84	32	1264	3	R 3	F	5142	4863	925	86.1	83.3	580	456	393	94.0	263	1904	279
84	33	1265	2	C	M	5810	5512	1330	63.9	79.4	802	592	477	88.3	298	1740	298
84	33	1266	2	C	M	6603	6281	1171	87.1	68.6	866	674	479	131	367	2345	322
84	34	1267	3	R 7	F	4014	3827	765	45.3	41.1	472	380	397	81.4	311	1378	187
84	34	1268	3	R 7	F	4963	4736	994	47.2	49.1	522	537	381	87.8	304	1737	227
84	35	1269	1	H	M	7042	6781	1797	89.3	114	928	746	520	116	376	2042	261
84	35	1270	1	H	M	6637	6391	1676	50.8	76.2	778	612	493	123	335	2150	246
84	36	1271	3	C	F	5177	4957	1161	93.6	56.5	553	458	380	81.2	270	1822	220
84	36	1272	3	C	F	4331	4146	968	35.1	43.7	435	370	292	64.6	197	1688	185
84	37	1273	3	R 3	M	6097	5843	1016	66.3	70.0	824	701	439	109	249	2133	254
84	37	1274	3	R 3	M	5802	5546	1065	81.9	82.2	783	610	437	82.3	450	1942	256
84	38	1275	3	R 7	F	5408	5133	1094	38.4	57.1	615	463	367	75.0	382	1949	275
84	38	1276	3	R 7	F	4692	4423	684	86.2	60.3	589	422	333	85.6	360	1712	269
84	39	1277	2	H	M	6181	5902	1413	48.4	64.3	754	653	504	98.6	258	2107	279
84	39	1278	2	H	M	6441	6207	1409	77.7	65.0	671	650	456	98.9	347	2332	234
84	40	1279	1	R 7	F	4061	3803	757	41.9	51.0	502	420	298	56.5	227	1410	258
84	40	1280	1	R 7	F	4438	4225	858	77.6	48.8	467	396	306	79.8	355	1535	213
84	41	1281	3	R 7	M	6125	5915	935	93.3	112	763	618	501	94.2	390	2308	210

84	41	1282	3	R 7	M	5681	5327	909	35.2	68.2	683	630	398	105	321	2051	354
84	42	1283	2	C	F	4994	4776	1002	60.7	56.8	675	445	344	74.0	256	1789	218
84	42	1284	2	C	F	4715	4523	1107	97.7	56.7	596	429	346	60.6	193	1606	192
84	43	1285	1	C	M	6679	6383	1379	78.9	106	778	675	490	110	317	2373	296
84	43	1286	1	C	M	6913	6570	1593	81.8	91.9	815	691	458	109	537	2085	343
84	44	1287	3	H	F	5144	4932	938	44.0	42.2	641	528	352	105	272	1939	212
84	44	1288	3	H	F	5452	5226	1404	106	57.6	681	488	361	94.1	228	1779	226
84	45	1289	2	R 3	M	6235	5983	1053	69.0	68.7	787	324	483	112	372	2207	252
84	45	1290	2	R 3	M	5130	4895	865	79.2	69.9	580	507	409	111	264	1911	235
84	46	1291	3	R 3	F	4772	4566	781	82.1	51.0	507	482	345	85.7	219	1951	206
84	46	1292	3	R 3	F	5083	4817	941	95.2	44.6	669	469	349	101	354	1703	266
84	47	1293	3	C	M	6515	6194	1431	105	87.4	913	642	469	106	259	2079	321
84	47	1294	3	C	M	6486	6127	1287	101	82.3	765	588	485	141	282	2255	359
84	48	1295	2	R 3	F	4510	4217	780	56.1	37.8	538	446	315	99.6	384	1495	293
84	48	1296	2	R 3	F	4858	4631	934	85.9	60.5	575	417	362	84.6	387	1591	227

Age	Pen	Code	Strain	Feed	Sex	Weight	Breast Yiel	Skin Wei	Bone We	high Weigh	rum Weigh	Ving Weigh	.iver Weigh	Gut Weigh	main Weig	feathers	water	protein	lipid	otein Weight, g
1			R 3		M	43	-1.20397	*	-0.69315	0.521766	0.667829	-0.19237	0.34359	0.620576	3.391484	*	32.1	7.3	2.1	1.989
1			R 3		M	49	-1.20397	*	-1.04982	0.936093	0.553885	0.039221	0.65233	0.86289	3.442659	*	35.8	8.2	2.4	2.100
1			R 3		M	43	-0.69315	*	-0.65393	0.628609	0.485508	0.19062	0.57661	0.693147	3.332562	*	32.0	7.3	2.1	1.986
1			R 3		M	47	-1.07881	*	-0.59784	0.788457	0.60158	-0.12783	0.53649	1.141033	3.403528	*	34.7	7.9	2.3	2.068
1			R 3		M	38	-1.96611	*	-1.17118	0.536493	0.364643	-0.11653	0.65233	0.652325	3.216874	*	28.4	6.5	1.9	1.867
1			R 3		M	34	-1.13943	*	-1.04982	0.48858	0.296394	-0.24207	0.43825	0.678034	3.087856	*	25.5	5.8	1.7	1.758
1			R 3		F	28	-1.51413	*	-1.04982	0.039221	-0.01005	-0.47804	0.04879	0.438255	2.883123	*	20.6	4.7	1.8	1.550
1			R 3		F	45	-1.46968	*	-0.65393	0.70557	0.662688	0.139762	0.49470	0.741937	3.377588	*	33.3	7.6	2.8	2.032
1			R 3		F	48	-0.46204	*	-0.34249	0.562469	0.647103	0.131028	0.57661	1.131402	3.443618	*	35.6	8.1	3.0	2.098
1			R 3		F	41	-0.77653	*	-0.51083	0.509825	0.539413	0.039221	0.42527	0.536493	3.284664	*	30.5	7.0	2.6	1.944
1			R 3		F	39	-1.56065	*	-0.91629	0.395415	0.29267	-0.0202	0.37844	0.797507	3.255015	*	28.9	6.6	2.5	1.889
1			R 3		F	41	-0.52763	*	-0.47804	0.460584	0.539413	-0.00501	0.44469	0.871293	3.282789	*	30.5	7.0	2.6	1.942
1			R 7		M	41	-0.52763	*	-0.96758	0.539413	0.545227	-0.04082	0.55962	0.620576	3.257712	*	30.3	6.5	3.0	1.865
1			R 7		M	43	-0.40048	*	-0.46204	0.71784	0.553885	-0.02532	0.31481	0.506818	3.307253	*	31.8	6.8	3.2	1.914
1			R 7		M	40	-1.13943	*	-0.91629	0.678034	0.266203	-0.13926	0.48858	0.565314	3.285412	*	30.1	6.4	3.0	1.860
1			R 7		M	39	-0.99425	*	-0.96758	0.559616	0.435024	-0.04082	0.47000	0.678034	3.212858	*	29.2	6.2	2.9	1.831
1			R 7		M	35	-1.46968	*	-0.86750	0.388658	0.375006	-0.17435	0.09531	0.506818	3.145875	*	26.2	5.6	2.6	1.721
1			R 7		M	39	-0.52763	*	-0.82098	0.533565	0.60158	0.090754	0.61519	0.760806	3.175133	*	29.4	6.3	2.9	1.835
1			R 7		F	43	-0.59784	*	-0.59784	0.5738	0.652325	0.14842	0.27003	0.598837	3.349904	*	32.2	7.5	2.3	2.013
1			R 7		F	36	-1.42712	*	-0.91629	0.281412	0.314811	-0.09431	0.18232	0.615186	3.165475	*	26.3	6.1	1.9	1.812
1			R 7		F	32	-0.99425	*	-0.63488	0.392042	0.398776	-0.09431	0.30010	0.565314	2.982647	*	23.9	5.5	1.7	1.713
1			R 7		F	38	-0.57982	*	-0.38566	0.466874	0.479335	0	0.49470	0.672944	3.145014	*	28.0	6.5	2.0	1.873
1			R 7		F	38	-1.02165	*	-0.69315	0.494696	0.281412	-0.04082	0.40547	0.553885	3.214064	*	28.1	6.5	2.0	1.875
1			R 7		F	39	-0.56212	*	-0.51083	0.447886	0.451076	0.053541	0.36464	0.524729	3.233173	*	28.8	6.7	2.0	1.901
1			C		M	46	-0.38566	*	-1.02165	0.710496	0.700619	0.277632	0.37844	0.530628	3.412797	*	35.0	7.4	2.8	2.003
1			C		M	43	-1.04982	*	-0.59784	0.690644	0.392042	0.076961	0.28518	0.615186	3.33149	*	32.3	6.8	2.5	1.923
1			C		M	40	-0.73397	*	-0.79851	0.539413	0.524729	0.086178	0.21511	0.329304	3.252311	*	29.8	6.3	2.4	1.844
1			C		M	48	-0.30111	*	-0.77653	0.703098	0.732368	0.182322	0.35767	0.385262	3.466673	*	36.5	7.7	2.9	2.046
1			C		M	43	-0.79851	*	-1.02165	0.665262	0.392042	0.067659	0.09531	0.667829	3.360723	*	32.4	6.9	2.6	1.927
1			C		M	47	-0.77653	*	-0.89160	0.667829	0.647103	0.04879	0.13976	0.357674	3.485232	*	35.7	7.6	2.8	2.024
1			C		F	45	-0.37106	*	-0.79851	0.644482	0.542324	0	0.28518	0.470004	3.405853	*	33.3	7.7	2.2	2.042
1			C		F	45	-0.73397	*	-0.82098	0.654926	0.485508	0.19062	0.20701	0.559616	3.359333	*	33.3	7.7	2.2	2.042
1			C		F	47	-0.43078	*	-0.67334	0.688135	0.65752	0.117783	0.18232	0.314811	3.487987	*	35.4	8.2	2.3	2.105
1			C		F	43	-1.27297	*	-0.71335	0.826366	0.421994	0.014889	0.23111	0.29267	3.343568	*	32.3	7.5	2.1	2.011
1			C		F	45	-0.31471	*	-0.35667	0.644482	0.675492	0.067659	0.46373	0.41871	3.379974	*	33.5	7.8	2.2	2.050
1			C		F	41	-0.56212	*	-0.75502	0.598837	0.548121	0.139762	0.25464	0.593327	3.286161	*	31.0	7.2	2.0	1.970
1			H		M	37	-1.17118	*	-0.46204	0.463734	0.322083	-0.05657	0.27763	0.824175	3.173041	*	28.1	6.2	2.0	1.817
1			H		M	36	-0.91629	*	-0.94161	0.392042	0.354172	-0.07796	0.23902	0.760806	3.154017	*	27.2	6.0	1.9	1.785
1			H		M	37	-0.73397	*	-0.84397	0.518794	0.491643	-0.07796	0.22314	0.746688	3.140265	*	28.1	6.2	2.0	1.817
1			H		M	36	-0.96758	*	-0.52763	0.620576	0.178146	-0.20457	0.16551	0.760806	3.151025	*	27.4	6.0	1.9	1.792
1			H		M	36	-0.96758	*	-0.63488	0.463734	0.42853	-0.22314	0.35767	0.683097	3.107274	*	26.9	5.9	1.9	1.774
1			H		M	42	-0.59784	*	-0.57982	0.548121	0.556755	0.024693	0.48243	0.698135	3.326833	*	32.1	7.0	2.3	1.948
1			H		F	37	-1.34707	*	-0.37106	0.665262	0.099845	0.086178	0.35767	0.636577	3.146305	*	28.2	5.7	2.1	1.738
1			H		F	38	-0.63488	*	-0.63488	0.536493	0.368109	0.090754	0.32208	0.875469	3.169265	*	29.1	5.9	2.2	1.771
1			H		F	38	-0.73397	*	-0.57982	0.361165	0.381855	0	0.37156	0.625938	3.231595	*	29.1	5.9	2.2	1.770
1			H		F	36	-0.94161	*	-0.94161	0.623261	0.441476	0.024693	0.41211	0.587787	3.117507	*	27.6	5.6	2.1	1.718
1			H		F	39	-0.71335	*	-0.49430	0.527683	0.361165	0.072321	0.43178	0.989541	3.192121	*	29.3	5.9	2.2	1.777
1			H		F	38	-0.67334	*	-0.51083	0.503801	0.361165	0.08158	0.39204	0.765468	3.166319	*	28.5	5.8	2.1	1.750
7	1	101	R 7	2	M	147	2.43449	-0.08338	0.83725	1.922056	1.720084	1.667707	1.89762	2.967847	4.110218	0.029559	105.9	23.3	9.9	3.148
7	1	102	R 7	2	M	169	2.50553	0.70310	0.91629	2.080691	1.804182	1.792592	2.04769	3.207613	4.205289	0.392042	123.3	26.0	9.8	3.257
7	2	103	C	3	F	150	2.28136	0.44469	0.55962	1.928619	1.722767	1.624327	1.76130	2.991724	4.152771	1.081805	110.1	22.1	10.4	3.096
7	2	104	C	3	F	163	2.28544	0.49470	0.39878	2.110213	1.611436	1.624327	2.08069	3.185526	4.208863	0.963174	118.6	24.4	12.7	3.194
7	3	105	C	2	M	148	2.44582	0.50078	0.81093	1.682688	1.774952	1.60543	1.79009	3.215269	4.128585	0.737164	109.2	22.4	9.1	3.108
7	3	106	C	2	M	151	2.36180	0.86710	0.57661	1.890095	1.65918	1.554982	1.75094	3.170106	4.107096	0.871293	111.2	24.2	4.1	3.186
7	4	107	R 3	1	F	200	2.67415	0.93609	1.15057	2.225704	2.081315	1.914714	2.25863	3.318902	4.434382	1.000632	146.6	31.4	14.0	3.448

7	4	108	R 3	1	F	182	2.81481	0.99695	1.22964	2.118061	1.955153	1.946624	1.98787	3.073619	4.267177	1.294727	133.2	28.2	12.9	3.341
7	5	109	H	3	M	173	2.55645	1.09192	0.81978	2.146516	1.910283	1.83418	2.00013	3.132882	4.283724	0.548121	124.2	25.7	10.8	3.248
7	5	110	H	3	M	157	2.29152	0.11333	0.43825	2.11203	1.73077	1.704748	1.75613	2.962692	4.243913	-0.15082	110.3	24.5	15.1	3.200
7	6	111	C	1	F	190	2.65886	0.69315	1.31103	2.285439	2.092481	1.852384	2.10779	3.319626	4.335459	0.900161	140.8	29.3	12.4	3.377
7	6	112	C	1	F	200	2.63906	1.07841	1.01523	2.299079	2.023532	1.967811	2.19611	3.313095	4.409763	0.928219	147.3	30.6	10.9	3.422
7	7	113	R 3	1	M	196	2.86277	0.85442	1.05779	2.206625	2.003505	1.796747	1.92862	3.121483	4.465103	0.688135	143.7	30.8	14.4	3.427
7	7	114	R 3	1	M	193	2.71866	0.81093	1.40854	2.1383	2.048982	1.842928	2.09063	3.249987	4.383151	0.559616	144.3	31.2	5.1	3.439
7	8	115	H	2	F	173	2.65465	0.91228	1.09192	2.047693	1.893865	1.786747	1.88099	3.097837	4.292102	1.088562	123.4	27.4	13.7	3.309
7	8	116	H	2	F	179	2.70471	0.75142	0.92822	2.186051	1.962908	1.873339	2.03078	3.080992	4.310933	1.360977	127.9	28.7	16.1	3.357
7	9	117	H	1	M	161	2.39608	0.41211	0.43178	1.965012	1.725442	1.690096	1.96991	3.164208	4.246064	#NUM!	120.5	24.8	7.8	3.209
7	9	118	H	1	M	195	2.93704	1.00796	1.04732	2.303585	2.02221	1.955153	2.15060	3.148882	4.389002	0.24686	143.7	31.3	9.2	3.445
7	10	119	R 7	2	F	194	2.78686	0.74194	0.65752	2.207175	2.018231	2.018231	2.16332	3.137232	4.384399	1.029619	138.4	30.3	17.9	3.410
7	10	120	R 7	2	F	180	2.68580	0.92426	0.59884	2.080066	1.953737	1.867176	1.85317	3.151453	4.361569	1.098612	131.0	29.0	12.9	3.367
7	11	121	R 7	1	M	170	2.58927	0.91629	0.85015	1.932246	1.908801	1.663926	2.11142	3.118834	4.253341	0.587787	124.9	26.8	11.0	3.289
7	11	122	R 7	1	M	185	2.83615	0.98582	0.97456	2.141242	2.054765	1.780867	2.22570	3.208421	4.31562	#NUM!	137.0	28.9	12.4	3.365
7	12	123	H	1	F	197	2.76064	0.96698	1.13783	2.195	2.075057	2.005526	2.05156	3.17847	4.406231	1.255616	145.3	30.5	13.6	3.418
7	12	124	H	1	F	166	2.71932	0.72755	0.94001	1.953737	1.912501	1.677097	2.05540	2.967847	4.22698	1.169381	121.8	27.4	10.2	3.312
7	13	125	C	3	M	138	2.16332	0.78846	0.90016	1.922788	1.608437	1.530395	1.78507	2.889816	4.034241	1.131402	101.2	21.0	10.0	3.046
7	13	126	C	3	M	155	2.13889	0.87547	0.57661	1.893112	1.842136	1.674289	1.99198	3.135494	4.175156	1.088562	115.4	21.8	12.0	3.082
7	14	127	C	1	F	166	2.57185	0.73237	0.66783	1.958685	1.797576	1.679896	2.29354	3.142427	4.188897	0.947789	123.2	25.8	8.9	3.249
7	14	128	C	1	F	154	2.34084	0.36464	0.77473	1.870263	1.813195	1.770706	1.90658	3.100092	4.122608	1.018847	114.1	23.7	8.3	3.165
7	15	129	R 7	1	M	128	2.32923	0.21511	0.84587	1.767296	1.568616	1.557091	1.47018	2.949165	3.945071	0.536493	97.2	20.4	3.6	3.015
7	15	130	R 7	1	M	186	2.60046	1.21194	0.85866	2.16791	2.023532	1.834979	1.96009	3.168845	4.377893	0.908259	137.0	28.5	10.2	3.349
7	16	131	R 3	1	F	165	2.59525	0.92028	1.04380	2.165619	1.800058	1.780024	1.85160	3.067588	4.212572	0.405465	118.9	26.9	5.8	3.293
7	16	132	R 3	1	F	154	2.67896	1.22378	0.73716	1.999451	1.802535	1.7613	1.90061	2.915606	4.138042	1.05779	112.7	24.5	7.2	3.201
7	17	133	R 7	2	M	178	2.58551	0.84157	0.90826	2.054765	2.007543	1.759581	2.00956	3.17847	4.351954	0.667829	129.0	28.1	9.5	3.336
7	17	134	R 7	2	M	155	2.47317	0.74669	0.66783	1.905832	1.879465	1.689173	1.78171	3.110845	4.154185	0.928219	114.2	24.1	6.5	3.183
7	18	135	R 7	2	F	163	2.61374	0.55389	0.95166	1.902108	1.969906	1.66865	1.80993	3.091951	4.220683	0.482426	120.1	25.3	5.9	3.230
7	18	136	R 7	2	F	190	2.52172	1.01523	1.00796	2.263324	1.969906	1.814825	2.22786	3.168845	4.368688	1.391282	133.7	29.7	12.0	3.390
7	19	137	C	1	M	154	2.43886	0.56531	0.51879	2.021548	1.790926	1.638025	1.91986	3.019449	4.146304	1.432701	113.7	25.2	4.3	3.227
7	19	138	C	1	M	182	2.58626	1.24703	1.08519	2.06115	2.000128	1.696533	2.16447	3.295466	4.321082	1.068153	137.1	25.9	8.5	3.256
7	20	139	H	2	F	192	2.69124	0.86710	1.40364	2.067495	2.124654	1.852384	2.04381	3.205588	4.386765	1.373716	137.0	30.4	11.8	3.414
7	20	140	H	2	F	170	2.56418	0.55962	0.80200	2.026832	1.927164	1.793425	1.76473	3.07084	4.302848	1.12493	123.4	26.2	10.3	3.267
7	21	141	H	3	M	173	2.55179	1.15688	0.94001	1.983068	1.917658	1.695616	1.92716	3.131137	4.350149	0.438255	127.4	25.1	8.7	3.222
7	21	142	H	3	M	156	2.13653	0.91629	0.40547	1.930797	1.682688	1.529312	2.11746	3.091951	4.217889	0.576613	112.3	#VALUE!	*	*
7	22	143	R 3	2	F	191	2.55645	0.95166	0.89609	2.067495	2.03862	1.800058	2.20055	3.343215	4.387139	1.294727	138.2	30.2	8.4	3.406
7	22	144	R 3	2	F	175	2.77196	0.95166	0.99325	2.075684	1.823743	1.795087	2.03340	3.167583	4.233382	1.302913	127.6	26.7	9.6	3.284
7	23	145	R 3	2	M	164	2.57261	0.78390	0.55962	2.100469	1.822935	1.739589	1.77834	3.075005	4.223324	0.879627	120.6	25.8	6.6	3.249
7	23	146	R 3	2	M	152	2.50307	0.63658	0.89609	1.919126	1.868721	1.593309	1.56444	3.011113	4.17331	0.86289	109.0	24.0	11.3	3.178
7	24	147	H	1	F	195	2.77758	1.35325	0.85442	2.242304	2.016235	1.883275	2.15409	3.151881	4.352598	1.261298	141.5	30.6	12.1	3.422
7	24	148	H	1	F	167	2.89037	0.57661	0.63658	2.11505	1.891605	1.946624	1.83737	2.704042	4.243339	1.205971	122.0	28.0	9.6	3.331
7	25	149	R 3	1	M	191	2.65042	0.82418	1.08181	2.092481	2.064328	1.717395	1.76302	3.452841	4.409155	0.81093	145.6	29.8	6.8	3.393
7	25	150	R 3	1	M	208	2.93119	1.10526	0.93216	2.353278	2.192212	1.789256	2.29858	3.323596	4.400235	1.22083	151.3	32.1	15.1	3.469
7	26	151	R 7	1	F	181	2.74277	0.82855	0.92028	2.245486	2.006199	1.936581	1.90509	3.139833	4.281101	1.286474	132.6	28.5	11.0	3.349
7	26	152	R 7	1	F	175	2.68785	0.78390	1.13462	1.96361	1.981691	1.722767	1.92132	3.100543	4.295924	1.275363	129.8	27.9	-3.1	3.330
7	27	153	R 3	3	M	186	2.66445	0.78390	1.07158	2.165046	1.969208	1.788421	2.06306	3.244544	4.36704	0.86289	136.0	28.7	11.7	3.356
7	27	154	R 3	3	M	191	2.64191	1.05082	0.99695	2.086293	2.102303	1.823743	1.98376	3.166319	4.459913	0.802002	139.5	27.4	13.4	3.312
7	28	155	H	3	F	189	2.62829	0.90826	1.05431	2.045109	2.058601	1.782551	2.10657	3.144152	4.404888	1.449269	135.0	28.0	15.3	3.333
7	28	156	H	3	F	144	2.25549	1.13462	0.90422	1.928619	1.643839	1.724551	1.98513	2.904165	4.100161	1.258461	101.8	22.1	12.5	3.094
7	29	157	R 7	3	M	145	2.26799	0.90826	0.81536	1.808289	1.736071	1.517323	1.72098	2.966818	4.137244	0.587787	104.5	21.8	9.6	3.084
7	29	158	R 7	3	M	131	2.09433	0.86289	0.58222	1.782551	1.638997	1.519513	1.72633	2.800933	4.02553	0.788457	95.5	19.9	8.8	2.991
7	30	159	C	2	F	161	2.50797	1.29198	0.80200	2.118061	1.848455	1.803359	1.96431	2.936513	4.132122	1.327075	118.7	24.1	9.9	3.181
7	30	160	C	2	F	154	2.39425	0.81093	0.82855	1.853168	1.829376	1.552868	1.59534	3.063391	4.164958	1.319086	112.7	24.3	8.9	3.191
7	31	161	H	2	M	183	2.68239	1.11841	0.85015	2.250765	1.966413	1.946624	1.95303	3.126761	4.311068	0.963174	137.7	27.3	8.8	3.306
7	31	162	H	2	M	162	2.41681	0.30010	0.55389	2.018895	1.862529	1.853951	1.93730	3.040706	4.219655	1.160021	116.8	25.1	11.6	3.222
7	32	163	R 3	3	F	175	2.48823	0.95166	0.78846	1.977547	2.020885	1.684545	1.84372	3.109061	4.34627	1.418277	123.9	25.9	15.8	3.254

7	32	164	R 3	3	F	149	2.43537	0.98954	0.61519	1.849242	1.684545	1.565486	1.83896	2.950735	4.180522	1.150572	104.3	22.4	11.8	3.111
7	33	165	C	2	M	143	2.38140	0.72755	0.68310	1.824549	1.542229	1.65918	1.72811	3.121924	4.066973	1.004302	108.0	21.8	6.1	3.080
7	33	166	C	2	M	158	2.57718	0.75142	0.62594	1.788421	1.809927	1.661081	1.85786	3.150169	4.141705	1.432701	120.1	23.6	4.5	3.159
7	34	167	R 7	3	F	158	2.43010	0.96317	0.78390	1.912501	1.795087	1.569657	1.78171	3.065258	4.237723	1.085189	112.2	23.9	14.9	3.175
7	34	168	R 7	3	F	190	2.55568	1.09527	0.68310	2.349469	1.930071	1.769002	2.11384	3.256172	4.365389	1.258461	139.5	27.2	14.9	3.304
7	35	169	H	1	M	151	2.48157	0.74669	0.52473	1.824549	1.838961	1.641905	1.57485	3.154017	4.120175	0.392042	113.4	24.2	3.5	3.188
7	35	170	H	1	M	186	2.79789	0.87963	0.83291	2.207175	2.016901	1.947338	1.86718	3.164631	4.31922	0.985817	136.8	29.4	11.0	3.382
7	36	171	C	3	F	147	1.98513	0.63658	0.29267	1.970603	1.66865	1.631199	1.73695	3.008155	4.116432	1.229641	106.6	23.1	8.5	3.140
7	36	172	C	3	F	163	2.45616	1.05082	0.70310	1.935138	1.875641	1.577947	2.02946	2.996732	4.224056	1.199965	117.8	23.3	12.2	3.148
7	37	173	R 3	3	M	144	2.22462	0.57661	0.66269	1.785909	1.694698	1.626295	1.82938	3.067122	4.076181	0.928219	104.4	23.1	8.5	3.140
7	37	174	R 3	3	M	152	2.27316	0.87963	0.90422	2.087534	1.804182	1.703839	1.67896	3.019937	4.15591	0.770108	112.1	21.8	9.7	3.084
7	38	175	R 7	3	F	137	2.09802	0.72271	0.64185	1.809927	1.788421	1.552868	1.68640	2.837908	4.090169	1.258461	96.6	21.4	12.1	3.061
7	38	176	R 7	3	F	185	2.61885	0.86289	1.00796	2.049626	2.034706	1.778336	1.96009	3.130263	4.417394	1.332366	130.5	28.3	16.0	3.343
7	39	177	H	2	M	162	2.65886	1.24127	0.97833	1.843719	1.90806	1.643839	2.05796	3.032546	4.219361	1.128171	117.5	23.9	12.1	3.176
7	39	178	H	2	M	184	2.67690	1.01160	1.03318	2.25392	2.064328	1.859418	1.91250	3.215269	4.302036	1.064711	133.2	29.0	13.2	3.368
7	40	179	R 7	1	F	192	2.76317	1.08181	0.73716	2.342767	2.124056	1.948051	2.00553	3.008648	4.352083	1.743969	141.1	29.0	11.8	3.366
7	40	180	R 7	1	F	184	2.62104	0.99695	0.86710	2.194443	2.022871	1.931521	2.04769	3.291754	4.314684	1.451614	138.9	27.2	8.6	3.303
7	41	181	R 7	3	M	128	2.07065	0.44469	0.61519	1.697449	1.540088	1.442202	1.64481	2.834976	4.027314	0.647103	94.5	19.7	7.2	2.982
7	41	182	R 7	3	M	170	2.39334	0.98208	0.99695	1.976855	1.962908	1.713798	1.94448	3.025776	4.317621	1.199965	120.7	26.8	13.3	3.290
7	42	183	C	2	F	158	2.61885	0.89200	0.92822	1.795917	1.878701	1.65058	1.94448	2.967847	4.187835	1.506297	111.5	24.9	12.2	3.214
7	42	184	C	2	F	176	2.59077	1.08181	0.64710	1.947338	1.84055	1.635106	2.28646	3.154444	4.300545	1.398717	126.8	26.9	13.0	3.293
7	43	185	C	1	M	189	2.77820	1.06471	1.04028	2.218116	1.984444	1.948051	1.93007	3.186353	4.322277	1.435085	142.1	28.6	9.3	3.355
7	43	186	C	1	M	173	2.60121	0.74669	0.74669	2.183802	1.858639	1.767296	2.06179	3.118834	4.234976	1.321756	129.7	26.0	11.1	3.260
7	44	187	H	3	F	162	2.48989	1.01523	0.87129	1.867949	1.841343	1.641905	1.85942	3.180135	4.200804	1.300192	117.4	25.1	11.0	3.223
7	44	188	H	3	F	160	2.31353	0.90826	0.59333	1.81401	1.836573	1.599388	1.86097	3.140698	4.1892	1.564441	117.8	22.7	11.7	3.123
7	45	189	R 3	2	M	173	2.51285	0.91228	0.88377	2.073172	1.855516	1.800058	2.00418	3.160399	4.300681	0.982078	124.2	26.9	13.8	3.294
7	45	190	R 3	2	M	179	2.54081	0.95166	0.75612	2.147684	1.927892	1.737831	1.75613	3.178887	4.350407	0.802002	133.4	26.5	12.0	3.278
7	46	191	R 3	3	F	172	2.49155	1.07841	0.73237	2.037968	2.007543	1.750937	2.01757	2.973487	4.332705	1.175573	121.3	27.3	15.4	3.307
7	46	192	R 3	3	F	167	2.38509	1.02245	0.75612	2.079442	1.789256	1.794256	2.05284	3.037354	4.237579	1.272566	121.9	24.8	13.5	3.211
7	47	193	C	3	M	140	2.09433	1.09527	0.62058	1.661081	1.686399	1.48727	1.74920	3.017983	4.121149	1.244155	102.9	21.3	8.7	3.057
7	47	194	C	3	M	126	2.06179	0.84587	0.36464	1.73077	1.571736	1.501853	1.61542	2.915606	3.924742	1.308333	94.5	19.7	4.8	2.978
7	48	195	R 3	2	F	183	2.52573	0.63127	1.01885	2.144175	1.978239	1.89085	1.94448	3.101892	4.330865	1.327075	136.0	28.4	7.4	3.347
7	48	196	R 3	2	F	142	2.36462	0.75142	0.72271	1.654411	1.562346	1.611436	1.70293	2.982647	4.100492	1.18479	104.9	22.9	7.9	3.130
14	1	201	R 7	2	M	508	4.08362	1.72633	1.63705	3.307436	3.036874	2.975785	2.93916	4.127134	5.293305	1.791759	354.8	85.2	48.8	4.445
14	1	202	R 7	2	M	427	3.88773	1.73871	1.80665	3.000222	2.996981	2.751748	2.70805	3.83298	5.135798	1.609438	306.2	73.8	27.2	4.302
14	2	203	C	3	F	358	3.23514	1.62334	1.57485	2.899772	2.772901	2.681022	2.63189	3.740048	4.941642	2.197225	248.4	61.9	32.6	4.126
14	2	204	C	3	F	407	3.79436	1.93007	1.90509	2.956991	2.882564	2.649715	2.70805	3.835142	5.049856	2.484907	280.6	69.1	41.9	4.236
14	3	205	C	2	M	465	4.00661	1.77665	1.78842	3.131573	2.930127	2.901422	2.83380	4.104295	5.164786	2.397895	327.8	76.9	40.8	4.342
14	3	206	C	2	M	464	3.92138	1.91692	1.76473	3.263467	2.882284	2.90963	2.73437	3.965564	5.181784	2.639057	323.7	79.9	40.5	4.381
14	4	207	R 3	1	F	527	4.09717	2.21920	1.79009	3.373655	3.148882	2.985682	2.93916	4.120662	5.283204	2.70805	364.8	88.6	48.6	4.484
14	4	208	R 3	1	F	510	4.10049	2.07191	2.22786	3.199489	3.224858	2.965273	2.92316	4.057853	5.252273	2.564949	354.7	94.5	45.8	4.549
14	5	209	H	3	M	401	3.74502	1.49739	1.95445	2.966303	2.983153	2.682732	2.57261	3.934371	5.068904	1.791759	282.9	63.3	34.0	4.147
14	5	210	H	3	M	427	3.93535	1.91545	1.91839	2.973742	2.960105	2.703038	2.71469	3.976124	5.117994	2.197225	295.6	69.3	44.9	4.239
14	6	211	C	1	F	496	4.07652	1.85003	1.66203	3.326833	3.134624	2.991724	2.90690	3.919197	5.257495	2.397895	343.4	83.3	44.7	4.422
14	6	212	C	1	F	512	4.04585	1.72277	1.81156	3.282977	3.091724	3.064325	2.80940	4.127779	5.273	2.833213	361.6	86.3	30.4	4.457
14	7	213	R 3	1	M	518	4.02070	2.10657	1.86563	3.350606	3.237109	3.096934	2.91235	3.855453	5.303305	2.302585	362.3	91.1	42.9	4.512
14	7	214	R 3	1	M	451	3.91362	1.56653	1.90360	3.178054	3.063391	2.857332	2.63906	3.916214	5.192957	1.609438	328.8	75.2	27.6	4.320
14	8	215	H	2	F	465	3.97293	1.89311	1.61939	3.213059	3.015535	2.985177	2.86790	3.99305	5.129899	2.564949	324.2	75.9	41.3	4.330
14	8	216	H	2	F	386	3.78578	1.78675	1.72277	2.916689	2.882004	2.596746	2.63189	3.78419	5.01728	2.484907	266.6	61.7	38.6	4.122
14	9	217	H	1	M	419	3.87991	1.65823	2.04640	3.034953	3.005683	2.785628	2.62467	3.827771	5.081404	2.302585	305.7	73.1	23.4	4.292
14	9	218	H	1	M	435	3.98136	1.81156	2.11384	3.068518	3.039031	2.70905	2.83908	3.976687	5.087596	2.302585	312.2	72.2	29.3	4.280
14	10	219	R 7	2	F	387	3.87888	1.70656	1.86872	2.908266	2.869602	2.652537	2.59525	3.727379	5.023881	2.484907	266.1	64.5	36.0	4.166
14	10	220	R 7	2	F	360	3.47352	1.62531	1.51513	2.76569	2.677935	2.743417	2.59525	3.923359	4.941642	2.397895	251.9	59.7	30.3	4.089
14	11	221	R 7	1	M	375	3.97949	1.54330	1.65632	3.047613	2.979095	2.764746	2.37955	3.424588	4.912655	1.791759	267.4	66.3	26.0	4.194
14	11	222	R 7	1	M	490	4.16231	1.78339	2.08939	3.209633	3.156788	2.85647	2.89591	3.938081	5.247024	1.94591	353.6	80.1	33.4	4.383
14	12	223	H	1	F	441	4.04795	1.85317	1.72811	3.212455	2.909084	2.856183	2.72130	3.811982	5.129899	2.302585	302.4	73.7	41.5	4.300

14	12	224	H	1	F	427	3.82821	1.66013	1.86408	3.046188	3.035914	2.927453	2.70805	3.73146	5.105945	2.564949	305.2	72.0	32.9	4.276
14	13	225	C	3	M	408	3.72401	2.16217	1.91102	2.926918	2.890927	2.695303	2.83321	3.935153	5.049856	2.197225	281.4	66.3	45.4	4.193
14	13	226	C	3	M	472	3.93261	1.97824	2.02419	3.180551	3.103914	2.837615	2.84491	3.927699	5.220356	2.484907	318.0	76.2	53.6	4.333
14	14	227	C	1	F	439	3.97519	1.64481	1.80993	3.124345	3.090815	2.75079	2.77259	3.828859	5.105945	2.772589	310.5	74.6	32.0	4.312
14	14	228	C	1	F	378	3.98620	1.66959	1.77326	3.024806	2.822866	2.727853	2.45101	3.443618	4.955827	2.564949	266.5	65.9	26.8	4.189
14	15	229	R 7	1	M	411	3.82625	1.31909	1.64287	3.10324	2.961917	2.813611	2.69463	3.854394	5.043425	1.94591	305.0	70.6	15.2	4.257
14	15	230	R 7	1	M	515	4.14583	1.88555	2.15409	3.319083	3.197856	3.025291	2.87920	4.01458	5.278115	2.197225	366.6	86.9	36.1	4.464
14	16	231	R 3	1	F	378	3.77918	1.50851	1.82938	2.870452	2.360382	2.744061	2.78501	3.572346	4.990433	2.197225	263.8	62.9	30.3	4.141
14	16	232	R 3	1	F	525	4.03742	2.12942	2.23216	3.285412	3.210037	2.918311	3.01700	4.046554	5.308268	2.639057	367.5	87.2	48.0	4.468
14	17	233	R 7	2	M	418	3.80822	1.63511	1.61144	2.995232	2.984924	2.641554	2.86960	3.922963	5.117994	1.94591	292.6	69.4	35.9	4.240
14	17	234	R 7	2	M	397	3.87909	1.82132	1.78339	3.043331	2.828496	2.74695	2.58626	3.712596	5.043425	1.94591	275.7	68.3	34.5	4.225
14	18	235	R 7	2	F	389	3.71917	1.67335	1.70656	2.971696	2.880602	2.71899	2.70538	3.647797	5.023881	2.564949	270.9	64.1	32.9	4.161
14	18	236	R 7	2	F	461	3.80577	1.73166	1.82132	3.24688	3.099191	2.949688	2.85647	3.937691	5.204007	2.079442	317.4	83.8	31.9	4.429
14	19	237	C	1	M	532	4.11708	1.90806	2.12942	3.285974	3.143937	2.901147	2.97553	4.275276	5.278115	2.484907	384.5	86.4	35.3	4.459
14	19	238	C	1	M	365	3.69883	1.14740	1.90360	2.732092	2.878074	2.585129	3.01062	3.545298	4.983607	2.397895	262.2	58.9	25.3	4.076
14	20	240	H	2	F	455	4.02070	2.01624	1.95586	3.1381	3.070376	2.824647	2.80940	3.801315	5.141664	2.70805	314.9	75.0	43.2	4.317
14	20	241	H	2	F	403	3.78305	1.69928	1.88099	3.073156	2.801237	2.875822	2.70136	3.846524	5.030438	2.302585	278.0	61.8	42.7	4.124
14	21	242	H	3	M	458	3.84887	2.18267	1.77834	3.250956	2.938103	2.953347	2.96011	3.905401	5.192957	1.94591	312.0	87.0	48.5	4.466
14	21	243	H	3	M	332	3.41871	1.42070	1.48160	2.777265	2.63548	2.572994	2.50144	3.873698	4.828314	1.609438	240.1	53.1	22.9	3.972
14	22	244	R 3	2	F	323	3.47661	1.54116	1.45862	2.869602	2.486988	2.558002	2.36085	3.535728	4.85203	2.302585	232.1	53.5	22.2	3.981
14	22	245	R 3	2	F	301	3.39081	1.26695	1.75786	2.816307	2.653242	2.618855	2.16905	3.376563	4.75359	2.302585	214.8	49.4	19.6	3.901
14	23	246	R 3	2	M	404	3.77986	1.67896	1.68640	3.159975	2.937573	2.727853	2.49897	3.715765	5.062595	1.94591	287.4	62.8	28.1	4.140
14	23	247	R 3	2	M	384	3.79008	1.51951	1.75786	3.142858	2.915335	2.795145	2.51770	3.635479	5.010635	0	269.3	63.6	29.9	4.152
14	24	248	H	1	F	499	4.11887	1.82455	2.02815	3.224659	3.005187	3.032305	2.90690	3.91721	5.236442	2.639057	347.1	86.3	40.9	4.457
14	24	249	H	1	F	445	3.84887	1.81156	1.97408	3.093313	3.05022	2.844328	2.85071	3.849296	5.123964	2.564949	315.4	82.0	36.6	4.407
14	25	250	R 3	1	M	479	4.06612	1.65823	2.07568	3.228628	3.035674	2.921817	2.78809	4.100161	5.164786	2.302585	350.4	82.2	22.4	4.409
14	25	251	R 3	1	M	446	3.98248	1.67335	1.97962	3.044761	3.061286	2.827314	2.73112	3.848444	5.170484	2.079442	320.5	71.4	28.1	4.268
14	26	252	R 7	1	F	461	3.92356	1.55814	2.01890	3.209835	2.948379	2.786245	2.78501	4.179145	5.164786	2.70805	326.9	76.3	32.6	4.335
14	26	253	R 7	1	F	424	3.83601	1.75440	1.69378	3.132882	2.912079	2.83703	2.53370	3.879706	5.099866	2.564949	305.1	64.3	31.5	4.164
14	27	254	R 3	3	M	411	3.61631	1.53687	1.36864	3.028441	2.959068	2.74084	2.41591	3.811982	5.153292	1.386294	284.9	70.7	36.1	4.258
14	27	255	R 3	3	M	272	3.22486	1.32972	1.52606	2.541996	2.581731	2.368841	1.99742	3.465111	4.718499	1.386294	194.0	39.2	20.7	3.669
14	28	256	H	3	F	374	3.68938	1.55604	1.68640	2.871868	2.850707	2.615935	2.66584	3.689379	4.983607	2.564949	254.8	57.2	42.3	4.046
14	28	257	H	3	F	412	3.56530	1.90806	1.80171	3.028441	2.839078	2.800629	2.76695	3.762594	5.147494	2.397895	278.9	65.8	44.8	4.187
14	29	258	R 7	3	M	303	3.29916	1.40364	1.57277	2.722939	2.691243	2.339399	2.28747	3.628333	4.836282	1.609438	211.7	44.3	30.5	3.790
14	29	259	R 7	3	M	406	3.66689	1.87947	1.79342	3.07084	2.884801	2.841123	2.73242	3.657905	5.087596	1.94591	273.8	72.1	45.9	4.278
14	30	260	C	2	F	436	3.85651	2.04122	1.65441	3.022131	2.957511	2.89674	2.76820	3.879293	5.123964	2.564949	307.8	68.9	34.4	4.233
14	30	261	C	2	F	426	3.95470	1.77834	2.04769	3.097837	2.995732	2.73599	2.81780	3.726416	5.09375	2.484907	292.4	77.0	41.2	4.343
14	31	262	H	2	M	414	3.86577	1.79675	1.86563	2.901971	2.936513	2.771025	2.57642	3.818811	5.105945	2.079442	285.1	71.2	32.2	4.266
14	31	263	H	2	M	417	3.82625	1.59737	1.83737	3.037594	2.923162	2.916689	2.59002	3.839022	5.087596	1.791759	293.6	56.1	33.5	4.028
14	32	264	R 3	3	F	445	3.77574	2.13771	1.94162	3.17346	2.957511	2.908266	2.86220	3.846951	5.181784	2.397895	292.6	70.4	59.9	4.255
14	32	265	R 3	3	F	358	3.45947	1.18784	1.78507	2.802148	2.714695	2.647238	2.46725	3.710886	4.983607	2.302585	246.5	57.2	32.1	4.047
14	33	266	C	2	M	509	4.23135	1.99606	1.98650	3.258673	3.167583	2.959846	2.82672	3.86577	5.252273	2.70805	347.5	91.3	44.3	4.514
14	33	267	C	2	M	380	3.66356	1.72455	1.66959	2.830268	2.681022	2.805782	2.61301	3.870159	4.969813	2.197225	268.2	50.9	27.8	3.930
14	34	268	R 7	3	F	415	3.65894	1.95586	1.93297	3.079614	2.775709	2.815409	2.74406	3.821223	5.117994	2.564949	270.1	75.2	56.3	4.320
14	34	269	R 7	3	F	330	3.52371	1.54330	1.63900	2.723267	2.711378	2.480731	2.69395	3.583519	4.882802	1.94591	230.0	63.1	30.5	4.145
14	35	270	H	1	M	433	3.94061	1.53039	1.98650	3.063391	3.068053	2.80336	2.85647	3.92947	5.087596	1.791759	314.4	75.5	20.0	4.324
14	35	271	H	1	M	405	3.93808	1.58719	1.91839	3.017004	2.988204	2.72458	2.72130	3.831897	5.049856	1.94591	296.8	56.6	22.0	4.037
14	36	272	C	3	F	379	3.69138	1.63705	1.75613	2.8088	2.762538	2.545531	2.77259	3.90278	4.990433	2.197225	261.6	56.5	41.2	4.035
14	36	273	C	3	F	274	3.09377	1.54330	1.41585	2.606755	2.446685	2.411439	2.50144	3.548755	4.672829	2.079442	188.4	42.9	27.8	3.758
14	37	274	R 3	3	M	277	3.20356	1.16938	1.63511	2.566487	2.489065	2.277267	2.53370	3.399863	4.762174	1.609438	189.7	43.3	26.8	3.769
14	37	275	R 3	3	M	331	3.27336	1.47705	1.51293	2.81989	2.621039	2.545531	2.55723	3.809326	4.890349	1.94591	229.0	61.8	31.5	4.124
14	38	276	R 7	3	F	409	3.64884	1.91986	1.39377	3.110845	2.980619	2.815409	2.76001	3.723522	5.087596	2.484907	277.8	65.6	45.9	4.184
14	38	277	R 7	3	F	408	3.72714	2.21266	1.77665	3.06782	2.744061	2.80336	2.68102	3.805328	5.075174	2.397895	271.8	65.5	48.0	4.181
14	39	279	H	2	M	500	4.20484	2.21266	1.78171	3.236912	3.130919	3.056357	2.74727	4.027314	5.192957	2.397895	351.8	83.4	45.4	4.424
14	39	280	H	2	M	368	3.66766	1.61939	2.00418	2.960105	2.698	2.595255	2.73437	3.665355	4.990433	1.94591	257.5	60.3	32.3	4.100
14	40	281	R 7	1	F	425	3.87432	2.71866	2.17702	3.140265	2.985682	2.76317	2.63189	3.606313	5.153292	2.564949	301.0	71.2	33.0	4.266

14	40	282	R 7	1	F	458	4.03636	1.94305	2.10535	3.155084	3.056357	2.788093	2.66723	3.738622	5.192957	2.484907	318.5	75.6	44.9	4.325
14	41	283	R 7	3	M	386	3.70106	1.72455	2.06560	3.107274	2.631889	2.639057	2.69463	3.961955	5.010635	1.609438	273.4	64.3	29.9	4.164
14	41	284	R 7	3	M	414	3.65040	1.98787	1.58719	3.142858	2.886754	2.78192	2.85647	3.97481	5.081404	1.609438	290.1	68.0	36.1	4.220
14	42	285	C	2	F	534	4.20529	2.44582	1.71199	3.453157	2.78963	3.027715	2.66723	4.118061	5.308268	2.772589	367.4	87.7	52.9	4.474
14	42	286	C	2	F	431	3.92138	1.86718	2.06433	3.219276	2.800629	2.72458	2.68102	3.848657	5.141664	2.397895	303.7	72.1	39.3	4.279
14	43	287	C	1	M	436	3.91959	1.82777	1.89462	3.109061	2.919121	2.865054	2.60269	3.971046	5.081404	2.564949	316.8	74.8	25.7	4.315
14	43	288	C	1	M	404	3.88732	1.67335	2.13061	3.149526	2.747271	2.78192	2.66026	3.956423	4.983607	3.178054	295.1	70.0	20.5	4.249
14	44	289	H	3	F	370	3.81353	1.68269	1.82455	2.867615	2.75906	2.568788	2.54945	3.698335	4.962845	2.079442	252.6	62.4	34.3	4.134
14	44	290	H	3	F	452	3.87991	1.83896	2.03471	3.063858	3.008155	2.75684	2.69463	3.992496	5.17615	2.564949	316.5	69.1	41.4	4.236
14	45	291	R 3	2	M	432	3.96215	1.75267	1.96991	2.988204	3.019205	2.753979	2.46810	3.777577	5.17615	2.197225	307.1	73.5	36.0	4.298
14	45	292	R 3	2	M	408	3.86640	1.71019	2.03862	3.06875	2.793922	2.652185	2.52573	3.88732	5.087596	1.791759	295.7	72.6	17.1	4.285
14	46	293	R 3	3	F	458	3.91880	1.98376	1.57277	3.088767	2.951258	2.843455	2.80940	3.959479	5.214936	2.484907	315.0	74.4	53.1	4.309
14	46	294	R 3	3	F	456	3.77092	1.69562	1.80006	3.236716	2.986692	2.95803	2.70136	3.902579	5.198497	2.70805	310.4	74.0	49.0	4.304
14	47	295	C	3	M	359	3.56388	1.80171	1.79840	2.800933	2.772901	2.592265	2.39790	3.851636	4.955827	2.302585	254.6	59.1	31.0	4.079
14	47	296	C	3	M	454	3.79414	1.98376	1.66959	3.12016	2.895912	2.866762	2.86220	4.005695	5.198497	2.564949	315.6	77.7	38.3	4.352
14	48	297	R 3	2	F	429	3.92573	1.84055	1.46787	3.107497	2.906628	2.819592	2.60269	3.897721	5.105945	2.639057	304.6	75.5	38.0	4.324
14	48	298	R 3	2	F	373	3.62301	1.79342	1.61144	3.081681	2.536471	2.762223	2.56495	3.66048	4.997212	2.484907	264.6	61.9	23.7	4.125
21	1	301	R 7	2	M	658	4.33821	2.03209	2.29958	3.52312	3.409992	3.31455	3.06852	4.439116	5.517453	2.197225	467.1	117.7	34.0	4.768
21	1	302	R 7	2	M	622	4.33047	1.87180	2.24390	3.463859	3.223664	3.263275	2.89646	4.397408	5.480639	1.94591	441.4	110.3	29.1	4.703
21	2	303	C	3	F	819	4.69135	2.60121	2.41770	3.754784	3.538202	3.502083	3.18180	4.391729	5.758902	3.218876	538.9	139.5	106.8	4.938
21	2	304	C	3	F	781	4.64439	2.66026	2.59898	3.717102	3.563316	3.499231	3.17011	4.323868	5.697093	3.044522	509.4	138.3	97.7	4.929
21	3	305	C	2	M	888	4.70953	2.65956	2.40243	3.970292	3.596764	3.589611	3.37929	4.497251	5.808142	3.178054	598.8	150.6	87.1	5.014
21	3	306	C	2	M	887	4.84419	2.54788	2.62901	3.85344	3.758172	3.503604	3.06898	4.445823	5.780744	3.367296	616.9	158.3	75.2	5.064
21	4	307	R 3	1	F	1021	5.01728	2.69327	2.54632	4.025352	3.86577	3.739335	3.26652	4.489535	5.955837	3.401197	704.9	181.9	84.4	5.203
21	4	308	R 3	1	F	792	4.70048	2.21920	2.51770	3.655581	3.611593	3.435438	3.43334	4.586803	5.616771	3.332205	559.7	145.8	50.8	4.982
21	5	309	H	3	M	652	4.25007	2.42569	1.90806	3.512739	3.365052	3.289334	2.89536	4.149622	5.568345	2.890372	443.9	109.6	64.6	4.697
21	5	310	H	3	M	784	4.54425	2.32337	2.53370	3.79414	3.542842	3.565723	3.17346	4.280962	5.720312	2.944439	529.9	130.3	69.6	4.870
21	6	311	C	1	F	775	4.70048	2.25759	2.48574	3.795826	3.53733	3.461037	3.11218	4.328362	5.620401	2.995732	543.7	136.3	55.7	4.915
21	6	312	C	1	F	876	4.74493	2.53845	2.72916	3.75572	3.729541	3.543854	3.42426	4.407329	5.768321	3.433987	599.2	161.8	68.3	5.086
21	7	313	R 3	1	M	979	4.92071	2.45616	2.41054	4.016383	3.823082	3.659837	3.52223	4.615121	5.905362	3.044522	*	#VALUE!	*	*
21	7	314	R 3	1	M	823	4.76217	2.73046	2.33408	3.694489	3.567559	3.45537	3.30835	4.434738	5.713733	3.218876	566.4	149.4	59.1	5.006
21	8	315	H	2	F	834	4.72739	2.52333	2.47401	3.713938	3.632441	3.527389	3.19786	4.366278	5.736572	3.583519	582.2	144.7	69.4	4.975
21	8	316	H	2	F	747	4.70048	2.53449	2.51770	3.67706	3.452049	3.526213	3.00519	4.358758	5.583496	3.637586	504.8	133.3	67.7	4.893
21	9	317	H	1	M	902	4.73620	2.48324	2.62104	3.838807	3.766303	3.701179	3.31782	4.44006	5.817111	3.218876	*	#VALUE!	*	*
21	9	318	H	1	M	960	4.89035	2.71204	2.42745	3.951244	3.872866	3.644144	3.35271	4.427836	5.891644	3.135494	661.9	172.4	83.3	5.150
21	10	319	R 7	2	F	787	4.57574	2.30956	2.64048	3.728341	3.648448	3.398694	3.10279	4.345752	5.733341	3.091042	542.2	144.3	55.3	4.972
21	10	320	R 7	2	F	755	4.52168	2.28747	2.55257	3.646624	3.63706	3.383033	3.11706	4.312944	5.66296	3.091042	520.5	127.5	58.9	4.848
21	11	321	R 7	1	M	883	4.75359	2.55645	2.73567	3.795939	3.785666	3.54818	3.36142	4.399252	5.817111	3.258097	598.8	158.2	69.4	5.064
21	11	322	R 7	1	M	861	4.70953	2.78006	2.54396	3.875774	3.689879	3.528711	3.27299	4.624973	5.739793	3.218876	601.3	143.9	68.3	4.969
21	12	323	H	1	F	785	4.70953	2.35518	2.48073	3.67845	3.569674	3.557916	3.17513	4.267597	5.669881	3.367296	544.6	140.3	52.9	4.944
21	12	324	H	1	F	542	4.26942	2.05156	2.21266	3.330954	3.227241	2.987196	2.95178	4.056989	5.31812	2.639057	379.5	97.7	40.3	4.582
21	13	325	C	3	M	816	4.60517	2.66166	2.54788	3.712108	3.678071	3.399529	3.22008	4.43272	5.703782	3.258097	552.8	135.3	85.1	4.908
21	13	326	C	3	M	800	4.62497	2.58551	2.47064	3.833629	3.590026	3.398694	3.32251	4.474264	5.66296	3.044522	540.4	135.2	97.9	4.907
21	14	327	C	1	F	919	4.99043	2.71734	2.81241	3.941582	3.822426	3.556348	3.28653	4.31348	5.78996	3.332205	627.7	161.8	74.1	5.086
21	14	328	C	1	F	816	4.81218	2.39151	2.58324	3.769307	3.635611	3.503002	3.24259	4.404399	5.676754	3.401197	555.0	149.3	73.9	5.006
21	15	329	R 7	1	M	789	4.57554	2.60121	2.43712	3.741116	3.609566	3.547316	3.11396	4.301494	5.726848	2.995732	529.0	138.3	71.1	4.930
21	15	330	R 7	1	M	871	4.79579	2.50553	2.62684	3.784644	3.804215	3.517795	3.41543	4.424367	5.774552	3.091042	608.6	155.3	54.6	5.045
21	16	331	R 3	1	F	619	4.44053	1.94876	2.43973	3.48661	3.457105	3.165053	2.94497	4.182203	5.411646	2.944439	430.5	111.9	46.1	4.718
21	16	332	R 3	1	F	589	4.45493	2.01757	2.45788	3.361417	3.36263	3.120822	2.92370	3.925334	5.384495	3.044522	395.5	110.6	53.1	4.705
21	17	333	R 7	2	M	670	4.39099	2.38417	2.35138	3.638507	3.514526	3.404359	3.14458	4.081597	5.513429	2.639057	471.8	121.5	39.2	4.800
21	17	334	R 7	2	M	751	4.44852	2.37769	2.34851	3.733136	3.633499	3.504806	3.04643	4.239599	5.666427	2.995732	525.9	133.1	53.6	4.891
21	18	335	R 7	2	F	720	4.53978	2.39608	2.44061	3.568687	3.572486	3.300271	3.02140	4.312275	5.602119	3.367296	487.1	121.4	79.3	4.799
21	18	336	R 7	2	F	856	4.66344	2.59824	2.46640	3.951244	3.680973	3.615905	3.33292	4.490096	5.746203	3.401197	*	#VALUE!	*	*
21	19	337	C	1	M	785	4.54244	2.41054	2.67277	3.722677	3.584491	3.477232	3.15487	4.453184	5.703782	3.258097	550.2	138.8	54.4	4.933
21	19	338	C	1	M	968	4.95583	2.60786	2.68444	3.970292	3.870888	3.652864	3.43140	4.520375	5.860786	3.218876	679.5	174.8	67.0	5.163
21	20	339	H	2	F	721	4.55839	2.39971	2.50879	3.716981	3.54674	3.487222	3.06433	4.215086	5.556828	3.135494	504.2	118.5	63.3	4.775

21	20	340	H	2	F	692	4.50336	2.33214	2.48906	3.571081	3.489971	3.275634	3.11883	4.187531	5.549076	3.091042	474.8	121.9	54.3	4.803
21	21	341	H	3	M	673	4.34394	2.15409	2.21266	3.538202	3.475686	3.355502	3.03303	4.229895	5.590987	2.944439	450.2	117.5	74.9	4.766
21	21	342	H	3	M	645	4.32968	2.11021	2.30956	3.604546	3.400364	3.343568	2.93119	4.127941	5.521461	2.995732	441.5	112.0	60.0	4.718
21	22	343	R 3	2	F	708	4.64439	2.50144	2.45959	3.605634	3.483545	3.273743	3.18635	4.052828	5.56452	3.496508	478.9	135.5	66.0	4.909
21	22	344	R 3	2	F	830	4.62497	1.94591	2.71071	3.742657	3.685499	3.499533	3.29916	4.403176	5.755742	3.367296	557.9	140.3	88.0	4.944
21	23	345	R 3	2	M	864	4.70953	2.32239	2.65605	3.746677	3.790307	3.425402	3.32755	4.396176	5.828946	2.564949	604.1	151.2	58.0	5.019
21	23	346	R 3	2	M	834	4.65396	2.21266	2.44669	3.870159	3.762246	3.581851	3.25154	4.273467	5.755742	2.70805	580.5	146.8	55.7	4.989
21	24	347	H	1	F	762	4.67283	2.42303	2.63834	3.671479	3.612133	3.551627	3.19908	4.272351	5.583496	3.526361	531.5	139.2	52.5	4.936
21	24	348	H	1	F	720	4.45330	2.24284	2.35042	3.637455	3.51065	3.419037	3.26995	4.247209	5.602119	3.091042	511.5	127.5	41.8	4.848
21	25	349	R 3	1	M	573	4.09850	1.81156	2.28849	3.413784	3.410818	3.093086	3.40652	4.097506	5.375278	2.197225	414.9	102.4	22.0	4.629
21	25	350	R 3	1	M	843	4.82028	2.36085	2.54945	3.807218	3.688879	3.544865	3.23396	4.414615	5.710427	2.890372	600.5	154.0	44.0	5.037
21	26	351	R 7	1	F	788	4.61512	2.49238	2.56187	3.700684	3.572346	3.556776	3.11529	4.293605	5.703782	3.332205	543.8	141.7	71.1	4.954
21	26	352	R 7	1	F	882	4.76217	2.58173	2.70538	3.810101	3.749151	3.534124	3.24843	4.403666	5.820083	3.332205	588.1	155.7	87.2	5.048
21	27	353	R 3	3	M	872	4.69135	2.43274	2.60269	3.820456	3.76503	3.502851	3.29658	4.512287	5.793014	3.258097	587.0	150.2	99.2	5.012
21	27	354	R 3	3	M	722	4.32704	2.44408	2.31649	3.674146	3.500892	3.368846	3.04071	4.409642	5.648974	2.639057	481.9	126.1	72.2	4.837
21	28	355	H	3	F	865	4.77068	2.35991	2.62467	3.816503	3.685248	3.544143	3.34286	4.487062	5.783825	3.178054	567.7	145.6	103.1	4.981
21	28	356	H	3	F	740	4.44441	1.95161	2.52172	3.670334	3.51898	3.37827	3.14501	4.341465	5.620401	3.178054	500.5	124.8	75.8	4.827
21	29	357	R 7	3	M	667	4.34029	2.11746	2.25024	3.635479	3.506608	3.399195	2.94812	4.137883	5.533389	2.944439	458.1	115.9	53.3	4.753
21	29	358	R 7	3	M	611	4.18479	2.35328	2.26072	3.452841	3.319083	3.296762	2.99773	4.157319	5.455321	2.833213	416.9	105.9	51.7	4.663
21	30	359	C	2	F	715	4.60207	2.28442	2.41413	3.617249	3.499684	3.286348	3.01308	4.275693	5.57973	3.178054	492.3	#VALUE!	*	*
21	30	360	C	2	F	546	4.32942	1.94305	2.24071	3.353931	3.317997	3.190271	2.59227	3.732418	5.303305	2.995732	354.6	108.9	55.4	4.691
21	31	361	H	2	M	931	4.88280	2.61447	2.63261	3.903588	3.746677	3.667017	3.17722	4.59734	5.831882	3.135494	640.8	163.5	82.9	5.097
21	31	362	H	2	M	899	4.85203	2.74084	2.52092	3.921973	3.718681	3.622072	3.18635	4.447346	5.799093	3.332205	613.6	158.1	81.6	5.063
21	32	363	R 3	3	F	680	4.38440	2.12823	2.28950	3.543998	3.472432	3.218276	2.99623	4.409885	5.545177	2.890372	460.3	117.9	70.6	4.770
21	32	364	R 3	3	F	727	4.16930	2.67553	2.30158	3.583102	3.498324	3.419365	3.13026	4.537427	5.624018	3.044522	492.8	120.9	78.8	4.795
21	33	365	C	2	M	850	4.82831	2.31944	2.68171	3.815182	3.732896	3.594981	3.23593	4.299731	5.739793	3.218876	574.3	145.8	74.8	4.982
21	33	366	C	2	M	812	4.68213	2.79117	2.53845	3.776432	3.602504	3.522234	3.11751	4.34627	5.680173	3.367296	542.8	147.5	80.6	4.994
21	34	367	R 7	3	F	680	4.43497	2.57261	2.30058	3.582963	3.385915	3.387605	2.96939	4.307168	5.517453	3.258097	452.6	120.3	64.5	4.790
21	34	368	R 7	3	F	700	4.41667	2.26280	2.53687	3.629793	3.585739	3.265759	3.06991	4.221271	5.602119	2.995732	448.1	122.0	92.8	4.804
21	35	369	H	1	M	794	4.62497	2.36931	2.53449	3.714425	3.613078	3.407842	3.09648	4.373238	5.70711	3.332205	548.8	141.6	61.1	4.953
21	35	370	H	1	M	999	4.96284	2.61447	2.81061	4.043051	3.877121	3.707947	3.38269	4.682131	5.849325	3.295837	710.5	176.3	65.1	5.172
21	36	371	C	3	F	652	4.51338	2.21485	2.36085	3.500288	3.365052	3.214466	2.80940	4.132122	5.533389	2.890372	444.0	113.3	69.1	4.730
21	36	372	C	3	F	595	4.21965	2.23109	2.06306	3.425402	3.264805	3.004692	2.95803	4.10413	5.46806	2.995732	391.9	96.2	74.7	4.566
21	37	373	R 3	3	M	539	3.93672	1.88858	2.26488	3.347269	3.211247	3.152736	2.84607	3.987501	5.365976	2.484907	370.0	92.0	50.0	4.522
21	37	374	R 3	3	M	415	3.58712	1.80665	1.82616	3.121042	2.985934	2.677935	2.57566	3.719409	5.164786	2.079442	278.7	68.2	48.5	4.222
21	38	375	R 7	3	F	673	4.20050	2.37955	2.30058	3.678955	3.520904	3.401031	3.10009	4.229895	5.521461	3.044522	465.8	118.5	61.1	4.775
21	38	376	R 7	3	F	668	4.21641	2.09556	2.42834	3.555491	3.380314	3.178262	3.00320	4.358246	5.583496	3.135494	436.2	107.9	84.1	4.682
21	39	377	H	2	M	778	4.63473	2.45788	2.65676	3.683364	3.588783	3.507507	3.24259	4.377893	5.669881	2.944439	547.4	137.2	56.5	4.921
21	39	378	H	2	M	720	4.54191	2.50716	2.49155	3.626738	3.578367	3.441539	3.14286	4.444414	5.568345	2.397895	517.2	129.5	38.8	4.864
21	40	379	R 7	1	F	938	4.74493	2.55645	2.63261	3.941582	3.761433	3.663433	3.39148	4.65396	5.863631	3.496508	630.7	163.4	93.9	5.096
21	40	380	R 7	1	F	707	4.68213	2.06939	2.44755	3.594157	3.527242	3.328089	2.98871	4.072269	5.541264	3.663562	497.5	129.5	40.6	4.864
21	41	381	R 7	3	M	634	4.11251	2.15871	2.22462	3.601959	3.489513	3.302113	2.95282	4.332705	5.521461	1.791759	431.6	102.5	58.7	4.630
21	41	382	R 7	3	M	512	3.99231	1.92862	2.01089	3.217275	3.170316	2.957771	2.82850	3.985273	5.337538	2.397895	354.9	84.2	42.8	4.433
21	42	383	C	2	F	749	4.62497	2.59227	2.54239	3.693369	3.493169	3.473053	3.13506	4.190412	5.605802	3.218876	505.8	133.0	66.4	4.891
21	42	384	C	2	F	875	4.67283	2.73696	2.73372	3.846097	3.634687	3.515121	3.39317	4.488749	5.768321	3.526361	586.3	150.7	82.2	5.015
21	43	385	C	1	M	1060	5.08760	2.70136	2.96990	4.025352	3.878466	3.778834	3.82647	4.416911	5.968708	3.367296	745.2	211.0	71.7	5.352
21	43	386	C	1	M	1038	5.01728	2.85532	2.62612	4.051785	3.941582	3.756071	3.40817	4.377265	5.945421	3.401197	724.4	180.3	91.5	5.195
21	44	387	H	3	F	796	4.58985	2.44322	2.66096	3.784871	3.572205	3.479855	3.14372	4.43367	5.686975	3.178054	539.3	132.0	78.7	4.882
21	44	388	H	3	F	740	4.46763	2.67484	2.50960	3.723281	3.530909	3.372455	3.00519	4.305011	5.63479	3.367296	493.9	122.9	82.5	4.812
21	45	389	R 3	2	M	811	4.65396	2.37118	2.56032	3.752206	3.760968	3.370394	3.34533	4.364626	5.726848	2.70805	557.4	137.0	62.7	4.920
21	45	390	R 3	2	M	663	4.41122	2.25339	2.47654	3.543131	3.340031	3.338435	3.06011	4.435923	5.476464	2.639057	470.2	118.2	45.5	4.772
21	46	391	R 3	3	F	844	4.58303	2.65676	2.70471	3.911423	3.607263	3.525919	3.36557	4.362207	5.768321	3.218876	558.2	137.7	88.2	4.925
21	46	392	R 3	3	F	676	4.39235	2.26176	2.46979	3.659322	3.472277	3.385237	2.84258	4.131961	5.556828	3.044522	458.0	113.3	71.9	4.730
21	47	393	C	3	M	847	4.70953	2.66792	2.43799	3.806329	3.761898	3.409331	3.37383	4.422809	5.762051	3.218876	586.9	143.5	64.1	4.966
21	47	394	C	3	M	744	4.62497	2.39425	2.59600	3.722193	3.671225	3.452841	3.15359	4.137085	5.605802	3.258097	518.0	133.3	49.4	4.892
21	48	395	R 3	2	F	898	4.93447	2.53370	2.64971	3.878983	3.80855	3.469946	3.27336	4.416428	5.777652	3.433987	620.5	152.4	59.7	5.027

21	48	396	R 3	2	F	608	4.19900	2.26799	2.53052	3.509155	3.380995	3.286161	2.96630	4.135007	5.4161	3.044522	433.8	105.2	37.3	4.656
21	24	397	H	1	F	839	4.81218	2.25444	2.78748	3.735405	3.686251	3.493777	3.18387	4.338858	5.733341	3.555348	583.8	148.4	64.4	5.000
21	24	398	H	1	F	888	4.92725	2.60565	2.78809	3.906307	3.720378	3.622606	3.11174	4.484358	5.733341	3.258097	623.7	#VALUE!	*	#VALUE!
28	1	401	R 7	2	M	1417	5.27811	2.59898	3.05918	4.363099	4.204693	4.119037	3.43753	4.836282	6.22059	4.127134	996.2	245.9	111.9	5.505
28	1	402	R 7	2	M	1543	5.38450	2.93279	3.06339	4.430817	4.356709	4.102643	3.75584	4.890349	6.298949	4.521789	1076.7	266.3	149.7	5.585
28	2	403	C	3	F	1474	5.46383	3.09603	2.92745	4.394449	4.127134	4.127134	3.70106	4.787492	6.278521	4.343805	961.1	240.7	198.5	5.484
28	2	404	C	3	F	1374	5.38450	2.99273	3.08649	4.343805	4.025352	3.988984	3.63574	4.85203	6.192362	3.7612	922.7	221.9	167.5	5.402
28	3	405	C	2	M	1705	5.62402	2.94022	3.17053	4.527209	4.310799	4.197202	3.85630	4.941642	6.410175	4.304065	1131.8	277.6	203.5	5.626
28	3	406	C	2	M	1603	5.52943	3.03783	3.10548	4.454347	4.343805	4.135167	3.75396	4.844187	6.336826	4.248495	1094.0	268.7	179.9	5.594
28	4	407	R 3	1	F	1567	5.45959	3.09513	2.91777	4.448516	4.363099	3.960813	3.73648	5.023881	6.285998	5.164786	1078.5	253.9	180.0	5.537
28	4	408	R 3	1	F	1546	5.49717	3.02432	2.98820	4.559126	4.204693	4.094345	3.60005	4.844187	6.315358	4.234107	1055.6	260.4	171.4	5.562
28	5	409	H	3	M	1230	4.99043	2.79789	2.93013	4.276666	4.051785	4.034241	3.56275	4.596936	6.161207	3.828641	856.9	198.5	125.6	5.291
28	5	410	H	3	M	1441	5.33272	2.82909	2.88870	4.394449	4.119037	4.051785	3.67351	4.820282	6.287859	4.060443	975.8	245.1	163.8	5.502
28	6	411	C	1	F	1659	5.54908	3.09919	3.16421	4.644391	4.448516	4.276666	3.76515	4.859812	6.329721	4.043051	1171.6	282.1	137.7	5.642
28	6	412	C	1	F	1571	5.44674	3.17136	3.47507	4.600158	4.255613	4.135167	3.65997	4.844187	6.276643	4.025352	*	#VALUE!	*	#VALUE!
28	7	413	R 3	1	M	1926	5.72685	3.33292	3.24103	4.714025	4.559126	4.189655	4.13501	5.09375	6.533789	4.110874	1304.4	310.4	222.7	5.738
28	7	414	R 3	1	M	1509	5.34711	2.60786	3.11218	4.465908	4.330733	4.060443	3.62354	4.779123	6.349139	4.043051	1045.2	250.2	154.0	5.522
28	8	415	H	2	F	1392	5.34711	2.87695	2.90690	4.290459	4.077537	4.051785	3.56275	4.770685	6.194405	4.465908	937.9	234.2	151.4	5.456
28	8	416	H	2	F	1337	5.30827	2.86106	3.01553	4.283587	4.051785	4.077537	3.23907	4.744932	6.180017	4.442651	*	#VALUE!	*	*
28	9	417	H	1	M	1808	5.71043	2.85934	3.50225	4.50535	4.424847	4.304065	3.94565	5.141664	6.43615	4.158883	1268.6	304.4	164.6	5.718
28	9	418	H	1	M	1752	5.70711	3.26957	3.13853	4.543295	4.400603	4.166665	3.90701	4.89784	6.385194	3.871201	1236.0	292.2	145.1	5.677
28	10	419	R 7	2	F	1353	5.18178	2.88926	3.00766	4.26268	4.18205	3.910922	3.59841	4.828314	6.188264	4.189655	894.8	223.8	180.6	5.411
28	10	420	R 7	2	F	1349	5.19850	2.81601	2.76001	4.350278	4.043051	4.016383	3.60658	4.955827	6.163315	4.204693	927.8	215.7	157.5	5.374
28	11	421	R 7	1	M	1598	5.46383	2.98518	2.98820	4.412798	4.337291	4.085976	3.68135	5.123964	6.311735	4.454347	1101.5	285.4	146.6	5.654
28	11	422	R 7	1	M	1604	5.37528	2.90142	3.06386	4.521789	4.324133	4.119037	3.69685	5.036953	6.36647	4.406719	1125.3	269.0	148.5	5.595
28	12	423	H	1	F	1425	5.38907	3.07269	3.19089	4.356709	4.174387	4.102643	3.57906	4.787492	6.224558	4.007333	963.2	246.8	164.6	5.509
28	12	424	H	1	F	1467	5.42495	3.13245	3.15487	4.382027	4.119037	4.034241	3.42556	4.962845	6.242223	4.204693	1001.1	252.2	150.8	5.530
28	13	425	C	3	M	1144	5.05625	2.52972	2.88536	4.212128	3.988984	3.815622	3.62514	4.615121	6.056784	3.401197	769.7	189.4	140.7	5.244
28	13	426	C	3	M	1126	4.94164	3.24259	2.71337	4.15104	3.862202	3.788838	4.12196	4.458293	6.054439	3.218876	750.4	160.0	167.0	5.075
28	14	427	C	1	F	661	4.53528	2.45014	2.52413	3.534416	3.505708	3.32071	3.11440	3.982668	5.46806	2.995732	*	#VALUE!	*	*
28	14	428	C	1	F	1370	5.30827	2.89812	2.87130	4.330733	4.241327	3.906709	3.61011	4.859812	6.146329	4.330733	*	#VALUE!	*	*
28	15	429	R 7	1	M	1703	5.54908	3.10324	3.12500	4.483003	4.494239	4.077537	3.82842	4.890349	6.378426	4.727388	1147.3	293.2	196.7	5.681
28	15	430	R 7	1	M	1657	5.56452	3.16716	3.18387	4.454347	4.400603	4.127134	3.74123	4.859812	6.36647	4.158883	1120.5	277.7	174.4	5.627
28	16	431	R 3	1	F	1190	5.13580	2.96579	2.95543	4.077537	4.007333	3.931826	3.52164	4.727388	6.068426	3.610918	829.7	201.7	115.5	5.307
28	16	432	R 3	1	F	1451	5.39363	3.21084	3.06386	4.324133	4.255613	4.102643	3.76004	4.867534	6.23637	3.89182	988.6	243.2	167.5	5.494
28	17	433	R 7	2	M	1485	5.44242	3.08877	3.08420	4.394449	4.297285	4.135167	3.66382	4.859812	6.287859	3.871201	1026.8	256.5	144.1	5.547
28	17	434	R 7	2	M	1418	5.31812	3.12016	3.22565	4.388257	4.212128	4.060443	3.62407	4.770685	6.212606	3.828641	982.0	240.6	153.1	5.483
28	18	435	R 7	2	F	1236	5.22575	2.85647	2.88815	4.226834	4.166665	3.817493	3.43978	4.867534	6.063785	4.26268	*	#VALUE!	*	*
28	18	436	R 7	2	F	603	4.10198	1.83258	2.16332	3.338435	3.31364	3.05164	3.27071	4.353627	5.451038	2.70805	*	#VALUE!	*	*
28	19	437	C	1	M	1633	5.58350	2.85417	3.31782	4.49981	4.324133	4.189655	3.86682	4.875197	6.335054	4.094345	1116.5	287.9	153.4	5.663
28	19	438	C	1	M	1773	5.65249	3.11085	3.07869	4.537961	4.430817	4.127134	3.94758	5.123964	6.44572	3.970292	1190.8	290.8	220.2	5.673
28	20	439	H	2	F	1135	5.18178	2.72589	2.73177	4.226834	3.898228	3.998201	3.39920	4.534426	5.953243	3.850148	777.9	183.8	132.8	5.214
28	20	440	H	2	F	1229	5.21494	2.70337	3.33861	4.26268	4.007333	3.988984	3.65092	4.624973	6.025866	3.931826	854.2	216.6	112.1	5.378
28	21	441	H	3	M	1208	5.15906	2.77259	2.97144	4.197202	4.016383	3.843316	3.63548	4.672829	6.109248	3.610918	822.1	198.4	132.1	5.290
28	21	442	H	3	M	1119	4.87520	2.69935	3.01013	4.069027	3.970292	3.881667	3.66177	4.820282	6.006353	3.367296	779.6	181.7	114.7	5.202
28	22	443	R 3	2	F	1350	5.30330	2.69867	3.05353	4.382027	4.166665	3.941582	3.46979	4.615121	6.163315	4.127134	922.7	233.0	145.1	5.451
28	22	444	R 3	2	F	1265	5.14749	2.71469	2.91181	4.276666	4.119037	3.970292	3.59484	4.770685	6.063785	3.931826	867.3	214.9	142.9	5.370
28	23	445	R 3	2	M	1263	5.15329	2.79789	2.82672	4.234107	4.127134	3.988984	3.54559	4.718499	6.133398	3.637586	880.6	207.9	134.7	5.337
28	23	446	R 3	2	M	1509	5.37528	3.02965	3.12895	4.460144	4.330733	4.034241	3.76792	4.941642	6.306275	3.828641	1057.1	254.6	137.8	5.540
28	24	447	H	1	F	1357	5.42053	2.89148	3.08237	4.290459	4.069027	4.034241	3.74029	4.787492	6.148468	4.043051	*	#VALUE!	*	*
28	24	448	H	1	F	1458	5.59842	2.83204	2.97808	4.304065	4.241327	3.979682	3.71820	5.010635	6.154858	4.234107	1004.5	257.8	60.0	5.552
28	25	449	R 3	1	M	1691	5.46383	3.01111	3.10504	4.584967	4.448516	4.060443	3.74762	4.976734	6.411818	5.123964	1163.1	284.4	177.5	5.650
28	25	450	R 3	1	M	1580	5.40268	3.22087	3.12676	4.516339	4.400603	4.212128	3.73696	4.844187	6.311735	4.663439	1099.8	275.7	154.1	5.619
28	26	451	R 7	1	F	1305	5.32788	2.78192	2.85186	4.189655	4.110874	3.902377	3.53573	4.672829	6.118097	4.394449	904.1	223.7	128.4	5.410
28	26	452	R 7	1	F	1530	5.34711	3.06712	3.06011	4.51086	4.166665	4.102643	3.42459	4.770685	6.295266	4.976734	*	#VALUE!	*	*
28	27	453	R 3	3	M	1633	5.40717	3.40253	3.09513	4.477337	4.436752	4.119037	3.81110	4.828314	6.43294	4.110874	1086.5	264.3	*	5.577

28	27	454	R 3	3	M	1429	5.20401	2.86619	2.91289	4.424847	4.297285	3.941582	3.74123	4.94876	6.278521	3.496508	969.0	240.3	167.1	5.482
28	28	455	H	3	F	1367	5.27300	3.17346	2.86106	4.343805	4.110874	3.951244	3.65481	4.859812	6.131226	4.442651	903.4	225.7	198.6	5.419
28	28	456	H	3	F	1259	5.16479	2.69463	2.80215	4.276666	4.069027	3.73981	3.62007	4.736198	6.118097	4.204693	*	#VALUE!	*	*
28	29	457	R 7	3	M	1535	5.28827	3.08191	3.05117	4.527209	4.219508	4.094345	3.56303	4.820282	6.36647	4.543295	1018.8	268.5	192.3	5.593
28	29	458	R 7	3	M	1602	5.29832	2.98568	3.10504	4.465908	4.255613	4.15104	3.81441	4.976734	6.386879	4.574711	1081.1	270.3	199.7	5.600
28	30	459	C	2	F	1456	5.57973	2.82731	2.89093	4.471639	4.212128	4.119037	3.60441	4.581185	6.192362	3.970292	1001.6	244.4	59.8	5.499
28	30	460	C	2	F	1396	5.38450	3.03447	2.89867	4.350278	4.034241	4.060443	3.64388	4.727388	6.159095	4.189655	943.5	227.9	175.4	5.429
28	31	461	H	2	M	1579	5.53733	2.78316	2.94759	4.50535	4.324133	4.158883	3.80577	4.912655	6.289716	4.143135	1107.8	261.9	162.4	5.568
28	31	462	H	2	M	1553	5.40717	3.09784	3.10683	4.465908	4.248495	4.197202	3.79324	4.867534	6.322565	4.189655	1077.5	251.0	169.5	5.526
28	32	463	R 3	3	F	1248	5.28320	2.72785	2.85186	4.204693	4.135167	3.862307	3.51333	4.727388	6.107023	4.574711	827.5	192.1	192.8	5.258
28	32	464	R 3	3	F	1383	5.33754	2.97706	2.95230	4.330733	4.15104	3.870993	3.53076	4.70048	6.180017	4.025352	884.7	220.8	222.8	5.397
28	33	465	C	2	M	1540	5.50939	2.99823	3.11040	4.477337	4.143135	4.158883	3.84117	4.941642	6.308098	4.043051	1075.1	262.7	66.7	5.571
28	33	466	C	2	M	1583	5.48480	3.15870	3.17388	4.50535	4.590057	4.110874	3.80577	4.890349	6.331502	4.219508	1091.2	270.0	170.6	5.598
28	34	467	R 7	3	F	1317	5.15329	2.79850	2.97960	4.255613	4.143135	3.941582	3.62327	4.820282	6.163315	5.003946	876.2	222.9	178.9	5.407
28	34	468	R 7	3	F	1387	5.12990	2.85647	2.99423	4.343805	4.143135	4.034241	3.47723	4.804021	6.259581	4.189655	934.4	225.6	194.6	5.419
28	35	469	H	1	M	1644	5.42935	3.05353	3.01111	4.465908	4.276666	4.241327	3.76653	5.123964	6.361302	4.430817	1148.0	285.8	164.5	5.655
28	35	470	H	1	M	1537	5.46806	2.86391	3.10951	4.406719	4.248495	4.174387	3.70056	4.882802	6.249975	4.543295	1085.6	266.3	114.5	5.585
28	36	471	C	3	F	1302	5.26786	3.08283	3.17680	4.516339	4.304065	4.051785	3.84117	5.010635	6.295266	#NUM!	872.3	214.7	177.4	5.369
28	36	472	C	3	F	1316	5.13580	3.02675	2.85474	4.330733	3.941582	3.555348	3.58574	4.812184	6.104793	4.828314	875.4	208.6	179.5	5.341
28	37	473	R 3	3	M	1335	5.31321	2.65956	2.96166	4.343805	4.189655	3.941582	3.50405	4.70048	6.159095	4.077537	902.4	209.0	152.7	5.342
28	37	474	R 3	3	M	1483	5.26269	3.04690	3.09919	4.412798	4.255613	4.119037	3.84182	4.89784	6.306275	4.634729	*	#VALUE!	*	*
28	38	475	R 7	3	F	1179	4.92725	2.72785	2.88926	4.226834	4.016383	3.829945	3.59895	4.60477	6.098074	3.89182	781.2	181.7	155.0	5.203
28	38	476	R 7	3	F	1335	5.24175	3.05730	2.67896	4.317488	4.204693	3.72171	3.68462	4.736198	6.182085	4.718499	873.7	198.5	173.2	5.291
28	39	477	H	2	M	1675	5.50533	3.19294	3.18800	4.471639	4.394449	4.051785	3.89508	4.927254	6.428105	4.394449	1124.1	263.8	188.1	5.575
28	39	478	H	2	M	1651	5.46806	3.09829	3.21326	4.532599	4.283587	4.226834	3.98991	4.85203	6.410175	3.89182	1148.6	264.2	156.3	5.577
28	40	479	R 7	1	F	1493	5.43372	2.63691	2.99623	4.454347	4.276666	4.119037	3.59127	4.976734	6.257668	4.644391	1042.9	239.5	131.0	5.479
28	40	480	R 7	1	F	1507	5.45532	2.97349	3.06058	4.375757	4.276666	3.970292	3.76954	4.955827	6.222576	4.454347	1028.9	242.5	153.6	5.491
28	41	481	R 7	3	M	1477	5.25750	2.77446	3.11928	4.388257	4.189655	4.060443	3.78305	4.934474	6.291569	4.532599	*	#VALUE!	*	*
28	41	482	R 7	3	M	1536	5.22575	3.00519	2.81181	4.219508	4.094345	3.793915	3.80488	4.812184	6.084499	5.768321	1019.9	238.5	215.9	5.474
28	42	483	C	2	F	1300	5.25227	2.86277	2.80215	4.241327	4.007333	3.844172	3.64336	4.836282	6.12905	4.094345	887.3	210.9	134.0	5.351
28	42	484	C	2	F	1367	5.15906	2.29253	2.93226	4.290459	4.043051	4.034241	3.60250	4.836282	6.204558	4.60517	931.0	221.1	130.4	5.399
28	43	485	C	1	M	1792	5.54518	3.24103	3.19253	4.527209	4.330733	4.248495	3.83665	4.934474	6.499787	4.718499	1234.1	292.4	177.9	5.678
28	43	486	C	1	M	1848	5.64191	2.92262	3.23789	4.677491	4.430817	4.248495	3.90922	5.081404	6.490724	4.477337	1262.2	295.8	200.8	5.690
28	44	487	H	3	F	1519	5.45532	3.33541	2.88312	4.356709	4.15104	4.119037	3.80422	4.779123	6.324359	4.394449	1048.1	221.2	154.3	5.399
28	44	488	H	3	F	1267	5.18178	2.97655	2.96269	4.255613	4.051785	3.921973	3.50796	4.582004	6.113682	4.406719	*	#VALUE!	*	*
28	45	489	R 3	2	M	1209	5.09375	2.78932	2.99323	4.119037	4.016383	3.871722	3.55449	4.584865	6.098074	3.713572	841.0	198.8	114.2	5.292
28	45	490	R 3	2	M	1414	5.49306	2.68785	2.99323	4.234107	4.283587	3.931826	3.52548	4.682131	6.173786	5.087596	994.2	237.3	116.4	5.469
28	46	491	R 3	3	F	1343	5.14166	2.82909	2.87356	4.310799	3.988984	3.941582	3.79930	4.691348	6.192362	4.356709	824.0	200.3	227.6	5.300
28	46	492	R 3	3	F	1360	5.14749	2.51770	3.16125	4.369448	4.119037	4.069027	3.65532	4.718499	6.180017	4.276666	929.4	212.1	138.7	5.357
28	47	493	C	3	M	1582	5.43372	3.29473	2.98062	4.483003	4.276666	4.18205	3.67782	4.990433	6.302619	4.65396	1054.4	242.4	183.5	5.490
28	47	494	C	3	M	1454	5.26786	3.02917	2.82138	4.388257	4.15104	4.016383	3.79841	4.962845	6.295266	4.234107	*	#VALUE!	*	*
28	48	495	R 3	2	F	1224	5.12990	2.79667	2.84025	4.226834	4.069027	3.979682	3.59841	4.561009	6.082219	4.189655	864.8	199.8	112.6	5.297
28	48	496	R 3	2	F	1281	5.22575	2.56955	2.98568	4.241327	4.034241	3.951244	3.49681	4.770685	6.084499	4.330733	898.4	206.8	113.3	5.332
35	1	501	R 7	2	M	1777	5.61313	2.59077	3.37074	4.436752	4.234107	4.50535	3.93143	5.056246	6.461468	4.158883	1236.4	293.0	169.0	5.680
35	1	502	R 7	2	M	1973	5.69036	2.94497	3.43946	4.68675	4.579852	4.356709	3.93084	5.01728	6.575076	4.343805	1330.5	338.3	207.3	5.824
35	2	503	C	3	F	1967	5.94542	3.63785	3.30689	4.695925	4.418841	4.174387	3.90661	4.828314	6.522093	4.394449	1252.2	313.6	306.9	5.748
35	2	504	C	3	F	1787	5.76832	2.98062	3.02091	4.65396	4.388257	4.15104	3.98546	4.691348	6.463029	4.290459	1102.6	278.4	304.9	5.629
35	3	505	C	2	M	1971	5.94280	3.06805	3.37108	4.639572	4.51086	4.310799	4.08177	4.867534	6.523562	4.204693	*	#VALUE!	*	*
35	3	506	C	2	M	1999	5.91350	3.30908	3.41936	4.766438	4.600158	4.269697	4.12082	4.787492	6.507278	4.49981	1311.8	343.3	214.9	5.838
35	4	507	R 3	1	F	1915	5.80212	3.35061	3.26002	4.714025	4.559126	4.234107	4.12826	5.049856	6.44572	4.317488	1289.8	308.7	178.2	5.732
35	4	508	R 3	1	F	1815	5.64191	3.09059	3.09150	4.579852	4.51086	4.15104	4.15309	5.135798	6.395262	4.418841	1248.5	314.4	136.1	5.751
35	5	509	H	3	M	1792	5.50126	2.47233	3.19253	4.65396	4.430817	4.283587	4.06234	4.882802	6.516193	4.369448	1165.8	297.0	243.0	5.694
35	5	510	H	3	M	2009	5.78383	3.00320	3.24376	4.658711	4.527209	4.400603	4.19011	4.962845	6.60665	4.682131	1267.3	335.0	294.8	5.814
35	6	511	C	1	F	2320	6.10256	3.68688	3.36419	4.828314	4.644391	4.330733	4.30649	5.187386	6.682109	4.465908	1439.2	380.5	348.1	5.941
35	6	512	C	1	F	1971	5.95324	3.27033	3.15188	4.639572	4.50535	4.406719	4.15450	5.056246	6.459904	4.49981	1298.0	336.1	219.3	5.818
35	7	513	R 3	1	M	1720	5.52943	3.15274	3.12192	4.51086	4.50535	4.174387	3.66587	4.94876	6.472346	4.189655	1124.3	285.3	220.8	5.654

35	7	514	R 3	1	M	1737	5.52146	2.94549	3.14587	4.559126	4.543295	4.174387	4.11496	4.997212	6.418365	4.143135	1203.1	303.7	148.8	5.716
35	8	515	H	2	F	1704	5.64191	2.68171	3.17053	4.553877	4.382027	4.110874	3.93084	4.718499	6.429719	4.394449	1147.3	286.9	168.5	5.659
35	8	516	H	2	F	1928	5.88888	3.19581	3.17972	4.59512	4.400603	4.310799	3.85503	5.062595	6.464588	4.532599	1266.1	307.9	238.2	5.730
35	9	517	H	1	M	2129	6.00389	3.31854	3.36419	4.766438	4.668145	4.350278	3.94951	4.890349	6.613384	4.85203	1428.3	439.3	171.5	6.085
35	9	518	H	1	M	2299	5.94017	3.32970	3.44298	4.75359	4.749271	4.418841	4.17807	5.278115	6.669498	4.875197	1548.5	340.2	259.5	5.829
35	10	519	R 7	2	F	1669	5.49717	3.25617	3.21286	4.521789	4.394449	4.094345	3.74337	4.820282	6.361302	4.564348	1061.1	215.5	226.9	5.373
35	10	520	R 7	2	F	2002	5.68017	3.24843	3.39047	4.70953	4.483003	4.424847	3.79504	5.129899	6.539586	4.65396	1290.4	550.4	282.1	6.311
35	11	521	R 7	1	M	2316	5.89715	3.28803	3.52164	4.863681	4.736198	4.436752	3.95144	5.141664	6.6995	4.89784	1566.8	315.3	217.5	5.754
35	11	522	R 7	1	M	1698	5.47227	2.58701	3.15530	4.49981	4.51086	4.234107	4.16449	4.70953	6.459904	4.043051	1134.2	249.0	168.7	5.517
35	12	523	H	1	F	1753	5.88888	3.32215	2.84955	4.532599	4.394449	4.15104	3.71892	4.812184	6.364751	4.330733	1144.0	304.1	209.5	5.717
35	12	524	H	1	F	1951	5.86079	3.20761	3.06246	4.649187	4.477337	4.350278	3.73838	4.941642	6.489205	4.844187	1310.0	343.7	191.0	5.840
35	13	525	C	3	M	2138	5.77144	3.44202	3.26805	4.718499	4.543295	4.436752	4.18616	5.111988	6.632002	4.744932	1384.7	334.4	276.6	5.812
35	13	526	C	3	M	1722	5.54908	3.25694	3.32468	4.634729	4.516339	4.219508	3.84267	4.736198	6.421622	4.219508	1135.0	267.2	218.4	5.588
35	14	527	C	1	F	1783	5.80814	3.27261	3.07362	4.559126	4.375757	4.204693	3.82994	4.744932	6.434547	4.553877	1158.2	294.4	240.6	5.685
35	14	528	C	1	F	1740	5.75257	3.15231	3.18883	4.590057	4.516339	4.15104	3.73791	4.598246	6.385194	4.682131	1154.4	294.1	204.4	5.684
35	15	529	R 7	1	M	2280	5.80513	2.99673	3.50104	4.871373	4.705016	4.388257	4.06113	5.26269	6.736967	4.615121	1516.2	362.2	283.7	5.892
35	15	530	R 7	1	M	2345	5.95324	2.82316	3.51482	4.93087	4.75359	4.363099	4.02303	5.327876	6.759255	4.406719	1614.7	397.4	206.5	5.985
35	16	531	R 3	1	F	1657	5.32301	2.69192	3.04500	4.564348	4.350278	4.135167	4.20648	5.153292	6.380123	4.110874	1075.4	260.2	202.5	5.562
35	16	532	R 3	1	F	1766	5.60947	3.21567	3.24142	4.527209	4.375757	4.226834	3.93163	4.976734	6.455199	4.430817	1109.4	277.8	273.6	5.627
35	17	533	R 7	2	M	1952	5.54908	3.10144	3.11618	4.649187	4.5486	4.356709	4.07516	4.955827	6.614726	4.430817	1269.1	299.1	255.8	5.701
35	17	534	R 7	2	M	1838	5.53339	2.63333	3.51482	4.615121	4.51086	4.226834	3.78146	4.795791	6.577861	4.26268	1218.9	308.0	205.2	5.730
35	18	535	R 7	2	F	1872	5.65599	3.19704	3.23907	4.668145	4.559126	4.324133	4.06251	4.89784	6.510258	5.135798	1211.1	309.3	216.9	5.734
35	18	536	R 7	2	F	1926	5.81413	3.10861	3.44681	4.70953	4.553877	4.283587	3.94255	5.023881	6.493754	4.330733	1248.6	310.2	258.0	5.737
35	19	537	C	1	M	2241	5.95324	3.49165	3.38235	4.848116	4.65396	4.412798	4.22610	5.181784	6.645091	4.49981	1467.2	375.1	274.0	5.927
35	19	538	C	1	M	2247	5.94542	3.01651	3.39182	4.840242	4.705016	4.412798	3.98843	5.087596	6.695799	4.477337	1533.3	370.1	194.0	5.914
35	20	539	H	2	F	1613	5.41165	2.97144	3.53135	4.494239	4.297285	4.234107	3.80176	4.624973	6.421622	4.219508	1062.9	262.0	200.2	5.568
35	20	540	H	2	F	1999	5.59842	2.91398	3.37554	4.649187	4.471639	4.343805	4.19810	4.997212	6.693324	4.382027	1252.9	317.1	306.0	5.759
35	21	541	H	3	M	1917	5.74939	3.44362	3.36142	4.615121	4.537961	4.197202	4.15198	5.036953	6.517671	4.418841	1242.0	301.5	276.0	5.709
35	21	542	H	3	M	2042	5.68017	2.62539	3.37963	4.770685	4.644391	4.375757	4.06629	5.043425	6.650279	4.382027	1304.4	323.7	297.4	5.780
35	22	543	R 3	2	F	1728	5.56452	3.25579	3.24649	4.620059	4.49981	4.069027	3.96024	4.836282	6.388561	4.49981	1101.2	262.4	256.3	5.570
35	22	544	R 3	2	F	1555	5.49306	3.28391	3.20680	4.406719	4.369448	4.069027	3.94333	4.727388	6.315358	4.49981	1040.0	240.2	191.0	5.481
35	23	545	R 3	2	M	2039	5.63121	2.65183	3.30101	4.828314	4.590057	4.382027	4.26535	4.976734	6.641182	4.304065	1346.9	311.2	261.5	5.740
35	23	546	R 3	2	M	2049	5.78690	3.22008	3.43108	4.736198	4.658711	4.304065	4.01440	5.129899	6.555357	5.361292	1341.6	340.4	*	5.830
35	24	547	H	1	F	1805	5.81711	2.91615	3.14113	4.584967	4.310799	4.204693	3.77849	5.181784	6.395262	4.304065	1247.5	#VALUE!	*	#VALUE!
35	24	548	H	1	F	1976	5.91350	2.97909	3.38575	4.668145	4.49981	4.388257	3.96537	5.030438	6.522093	4.521789	1316.9	328.2	196.5	5.794
35	25	549	R 3	1	M	2012	5.78690	2.91072	3.35585	4.787492	4.620059	4.375757	3.85968	5.049856	6.514713	4.406719	1346.4	328.6	217.4	5.795
35	25	550	R 3	1	M	1983	5.69709	3.11307	3.32107	4.624973	4.677491	4.424847	3.78328	5.105945	6.517671	4.564348	1375.4	342.5	146.2	5.836
35	26	551	R 7	1	F	1800	5.65249	3.28166	3.14974	4.624973	4.442651	4.158883	3.82100	4.912655	6.498282	4.290459	1168.3	295.0	223.4	5.687
35	26	552	R 7	1	F	1896	5.69709	3.09377	3.31091	4.649187	4.51086	4.375757	4.11120	5.135798	6.473891	4.234107	1284.0	322.2	178.0	5.775
35	27	553	R 3	3	M	1922	5.62402	2.55645	3.34568	4.668145	4.465908	4.166665	4.06595	5.062595	6.60123	4.290459	1257.9	296.5	250.2	5.692
35	27	554	R 3	3	M	1630	5.38450	3.06246	3.15444	4.50535	4.465908	4.085976	3.90096	4.804021	6.411818	4.204693	*	#VALUE!	*	*
35	28	555	H	3	F	1599	5.48894	3.07501	3.04690	4.49981	4.394449	4.069027	3.96859	4.820282	6.35437	4.158883	1002.1	242.6	267.4	5.492
35	28	556	H	3	F	1758	5.66643	3.23985	3.28877	4.600158	4.363099	4.304065	3.91042	4.927254	6.410175	4.26268	1094.1	283.9	266.8	5.649
35	29	557	R 7	3	M	2065	5.53339	3.33897	3.53135	4.744932	4.543295	4.343805	4.14646	5.068904	6.728629	4.110874	1311.1	329.0	300.2	5.796
35	29	558	R 7	3	M	1889	5.57595	3.01504	3.31491	4.663439	4.516339	4.276666	4.04217	4.927254	6.548219	4.442651	*	#VALUE!	*	*
35	30	559	C	2	F	1876	5.82305	3.31018	3.31564	4.624973	4.400603	4.330733	3.90298	4.890349	6.499787	4.276666	*	#VALUE!	*	*
35	30	560	C	2	F	1946	5.74939	3.23593	3.23396	4.663439	4.375757	4.269697	4.18159	4.955827	6.586172	4.60517	1234.2	308.4	278.6	5.732
35	31	561	H	2	M	2201	5.93489	3.05918	3.49529	4.774913	4.579852	4.430817	4.06113	4.983607	6.725034	4.248495	1430.9	377.6	275.7	5.934
35	31	562	H	2	M	2285	5.89440	2.92477	3.38269	4.799914	4.65396	4.559126	4.48627	5.087596	6.71174	4.477337	1458.7	376.8	308.2	5.932
35	32	563	R 3	3	F	1959	5.54518	3.46511	3.43108	4.691348	4.624973	4.212128	3.97368	5.129899	6.60123	4.204693	1241.0	298.6	281.9	5.699
35	32	564	R 3	3	F	1646	5.34711	3.07547	3.05965	4.527209	4.343805	4.102643	4.02249	4.969813	6.43615	4.356709	1054.6	245.7	238.3	5.504
35	33	565	C	2	M	1949	5.73657	3.15444	3.22764	4.770685	4.532599	4.369448	4.06337	4.927254	6.556778	4.430817	1312.0	335.5	208.7	5.816
35	33	566	C	2	M	1981	5.85793	2.57032	3.36038	4.705016	4.51086	4.297285	4.48481	4.941642	6.536692	4.234107	1327.3	344.9	218.2	5.843
35	34	567	R 7	3	F	1741	5.41610	3.02237	3.13810	4.615121	4.412798	4.166665	4.08799	4.804021	6.507278	4.770685	1079.7	265.9	294.1	5.583
35	34	568	R 7	3	F	1655	5.53339	3.28316	3.14888	4.584967	4.283587	4.110874	3.91701	4.969813	6.395262	2.079442	1053.6	268.9	225.4	5.594
35	35	569	H	1	M	1799	5.71373	2.82494	3.27223	4.516339	4.356709	4.283587	3.98787	4.672829	6.489205	4.110874	1251.0	285.9	177.1	5.656

35	35	570	H	1	M	1971	5.82008	2.77758	3.07084	4.705016	4.51086	4.337291	3.82319	5.181784	6.50279	4.584967	1364.7	345.9	135.2	5.846
35	36	571	C	3	F	1788	5.63121	2.82257	3.05400	4.65396	4.454347	4.343805	3.85206	4.75359	6.466145	4.543295	1128.6	275.9	290.3	5.620
35	36	572	C	3	F	1701	5.65948	3.12676	3.16336	4.483003	4.304065	4.158883	4.15591	4.779123	6.434547	4.488636	1062.5	262.6	268.6	5.570
35	37	573	R 3	3	M	1971	5.56068	2.74148	3.58213	4.691348	4.51086	4.356709	4.00223	4.859812	6.664409	4.543295	1234.5	304.5	302.5	5.719
35	37	574	R 3	3	M	1885	5.57595	3.11307	3.43140	4.65396	4.590057	4.330733	3.93633	4.969813	6.561031	4.158883	1185.8	293.8	281.2	5.683
35	38	575	R 7	3	F	2136	5.72359	3.21768	3.42361	4.804021	4.740575	4.375757	4.16480	5.257495	6.64379	4.204693	1370.4	344.8	279.7	5.843
35	38	576	R 7	3	F	1737	5.52545	3.10638	3.53310	4.527209	4.400603	4.269697	3.94372	5.030438	6.44254	4.382027	1068.8	274.2	289.7	5.614
35	39	577	H	2	M	2234	6.01616	3.59099	3.32468	4.882802	4.668145	4.50535	3.97669	4.844187	6.645091	4.290459	1454.8	384.0	279.8	5.951
35	39	578	H	2	M	2142	5.85793	3.19130	3.39886	4.779123	4.65396	4.477337	4.25163	5.003946	6.638568	4.043051	1397.1	368.5	277.8	5.909
35	40	579	R 7	1	F	2123	5.71373	2.91452	3.47166	4.691348	4.59512	4.430817	4.18890	5.09375	6.721426	4.744932	1435.3	347.8	219.9	5.852
35	40	580	R 7	1	F	1943	5.70044	3.13026	3.44521	4.672829	4.394449	4.219508	4.15560	5.010635	6.608001	4.317488	1258.7	323.6	246.8	5.779
35	41	581	R 7	3	M	2147	5.68358	3.13462	3.37280	4.855929	4.620059	4.460144	4.05300	5.049856	6.693324	4.343805	1358.1	365.3	284.3	5.901
35	41	582	R 7	3	M	1702	5.49306	2.86277	3.12325	4.579852	4.574711	4.127134	3.76861	4.89784	6.419995	4.007333	1140.0	285.1	189.5	5.653
35	42	583	C	2	F	1971	6.02828	3.23357	3.43849	4.722953	4.483003	4.290459	4.38253	4.75359	6.487684	4.26268	1278.0	351.4	244.0	5.862
35	42	584	C	2	F	1635	5.62402	2.62829	3.25733	4.488636	4.442651	4.174387	3.87598	4.663439	6.340359	4.442651	1076.4	271.5	200.4	5.604
35	43	585	C	1	M	2080	5.88888	2.90471	3.28504	4.812184	4.584967	4.471639	4.25604	4.94876	6.59987	4.49981	1400.9	339.8	235.5	5.828
35	43	586	C	1	M	2432	6.16331	3.52046	3.50134	4.912655	4.70048	4.60517	4.12196	4.787492	6.755769	4.672829	1591.8	392.8	275.9	5.973
35	44	587	H	3	F	2017	5.86647	2.52573	3.58906	4.718499	4.436752	4.369448	3.98453	5.068904	6.57368	4.330733	1279.9	329.2	294.8	5.797
35	44	588	H	3	F	1953	5.78383	3.21165	3.07915	4.634729	4.430817	4.343805	4.02428	5.062595	6.54103	4.143135	1263.0	301.8	280.7	5.710
35	45	589	R 3	2	M	2116	5.90808	2.81959	3.60929	4.787492	4.543295	4.454347	3.85651	4.89784	6.624065	4.644391	1342.6	363.8	274.8	5.897
35	45	590	R 3	2	M	1868	5.54518	2.64759	3.36384	4.744932	4.516339	4.26268	3.95163	4.997212	6.55108	4.158883	*	#VALUE!	*	*
35	46	591	R 3	3	F	1798	5.50126	2.24071	3.38235	4.714025	4.343805	4.290459	3.81242	4.890349	6.516193	4.532599	1139.3	292.1	272.3	5.677
35	46	592	R 3	3	F	1678	5.42495	3.03062	3.12983	4.537961	4.310799	4.219508	3.97462	4.927254	6.463029	4.219508	1060.6	270.0	233.2	5.598
35	47	593	C	3	M	1749	5.74300	3.22127	3.19048	4.620059	4.375757	4.189655	3.96367	4.65396	6.43935	4.204693	1111.2	284.6	253.5	5.651
35	47	594	C	3	M	1945	5.74300	3.06479	3.25925	4.795791	4.521789	4.317488	4.08261	4.919981	6.558198	4.204693	1251.4	#VALUE!	*	#VALUE!
35	48	595	R 3	2	F	1729	5.59099	2.89315	3.19130	4.574711	4.400603	4.226834	4.01998	5.01728	6.410175	4.317488	1157.0	290.6	190.3	5.672
35	48	596	R 3	2	F	1888	5.70044	3.19499	3.20112	4.682131	4.527209	4.290459	3.98267	4.927254	6.505784	4.418841	1241.5	305.9	232.7	5.723
42	1	601	R 7	2	M	2849	6.06611	3.55077	3.60359	5.020586	4.97328	4.634729	4.05456	5.463832	6.928538	4.634729	1850.8	475.1	390.9	6.163
42	1	602	R 7	2	M	3133	6.24998	3.07408	3.79189	5.17615	4.976734	4.731803	4.09318	5.645447	7.03966	4.736198	2043.9	528.9	394.6	6.271
42	2	603	C	3	F	2738	6.26530	3.59347	3.70795	5.078294	4.770685	4.65396	4.16790	5.062595	6.88551	4.795791	1667.0	446.2	484.4	6.101
42	2	604	C	3	F	2758	6.30810	3.48799	3.46605	5.102911	4.770685	4.60517	4.08075	5.068904	6.820016	5.231109	1567.2	467.8	544.9	6.148
42	3	605	C	2	M	2867	6.30628	3.14286	3.61416	4.9523	4.945207	4.668145	4.04147	5.099866	6.957497	4.795791	1888.1	481.9	347.6	6.178
42	3	606	C	2	M	2918	6.41182	3.66970	3.66433	5.120983	4.959342	4.663439	4.21316	5.187386	6.911747	4.532599	1932.3	476.9	332.9	6.167
42	4	607	R 3	1	F	2529	5.93225	2.97808	3.69262	5.049856	4.848116	4.600158	4.20812	5.420535	6.759255	4.859812	1662.8	422.2	323.4	6.046
42	4	608	R 3	1	F	2678	6.12030	3.43302	3.41936	5.120983	4.70048	4.564348	3.99379	5.379897	6.883463	4.820282	1671.2	427.7	411.7	6.058
42	5	609	H	3	M	2416	6.00881	3.19458	3.36867	4.908972	4.714025	4.5486	4.08362	5.351858	6.755769	4.75359	1441.0	432.0	396.8	6.068
42	5	610	H	3	M	2688	6.04263	3.55792	3.61685	5.065755	4.855929	4.59512	4.08866	5.170484	6.859615	4.962845	1735.4	443.5	371.9	6.095
42	6	611	C	1	F	3376	6.43294	3.24999	3.58629	5.265278	4.993828	4.783316	4.17792	5.624018	7.063048	5.298317	2129.7	631.2	303.3	6.448
42	6	612	C	1	F	2533	6.21661	2.95439	3.61254	4.908972	4.677491	4.488636	4.10099	5.068904	6.822197	4.727388	1615.5	418.2	353.6	6.036
42	7	613	R 3	1	M	3286	6.29342	3.25694	3.72231	5.231109	5.159055	4.779123	4.30676	5.497168	7.114769	4.820282	2105.5	554.2	423.1	6.317
42	7	614	R 3	1	M	3115	6.17587	3.42687	3.71820	5.147494	4.993828	4.740575	4.27444	5.605802	7.03966	4.812184	2079.1	524.5	334.7	6.262
42	8	615	H	2	F	2362	6.08450	2.90252	3.65092	4.812184	4.663439	4.483003	3.92336	5.09375	6.739337	4.85203	1491.3	393.7	343.6	5.976
42	8	616	H	2	F	2371	6.02828	3.34251	3.24454	4.97328	4.770685	4.442651	3.88814	4.969813	6.72263	4.70953	1527.1	393.5	318.0	5.975
42	9	617	H	1	M	2957	6.15486	3.59374	3.53369	5.147494	4.901564	4.762174	4.26268	5.209486	7.003065	5.036953	1880.5	490.8	396.4	6.196
42	9	618	H	1	M	3112	6.41836	3.05871	3.68813	5.102911	4.983607	4.766438	4.18510	5.361292	6.977281	5.141664	2048.0	548.4	359.0	6.307
42	10	619	R 7	2	F	2193	5.86079	3.39317	3.31854	4.779123	4.65396	4.356709	3.92731	5.129899	6.642487	4.85203	1416.9	352.7	295.7	5.866
42	10	620	R 7	2	F	2073	5.82305	2.97604	3.27374	4.787492	4.483003	4.369448	3.69660	4.867534	6.645091	4.85203	1323.5	342.3	290.7	5.836
42	11	621	R 7	1	M	3186	6.24028	3.38201	3.60332	5.288267	5.043425	4.714025	4.12730	5.7301	7.042286	4.770685	2070.9	545.3	382.8	6.301
42	11	622	R 7	1	M	2734	6.09131	3.40519	3.69337	4.901564	4.959342	4.579852	4.12342	5.568345	6.791221	5.056246	1874.2	462.8	237.7	6.137
42	12	623	H	1	F	1989	5.95842	3.39283	3.32970	4.770685	4.663439	4.330733	3.97931	4.456902	6.489205	4.820282	1291.7	330.7	270.9	5.801
42	12	624	H	1	F	2351	6.09582	2.81361	3.41444	4.941642	4.722953	4.49981	3.76259	4.94876	6.733402	4.634729	1529.1	389.3	305.9	5.964
42	13	625	C	3	M	2029	5.97126	3.13419	3.26155	4.783316	4.559126	4.424847	3.79729	4.477791	6.609349	4.574711	1199.9	380.9	355.9	5.942
42	13	626	C	3	M	2405	6.04737	2.99022	3.40320	4.94876	4.615121	4.430817	3.72352	5.141664	6.755769	4.844187	1455.8	385.4	421.6	5.954
42	14	627	C	1	F	2276	5.95842	3.01111	3.39484	4.875197	4.610158	4.49981	3.73481	4.890349	6.692084	4.912655	1426.7	503.2	335.2	6.221
42	14	628	C	1	F	2420	5.98394	3.49043	3.25963	4.941642	4.672829	4.543295	3.96272	5.247024	6.766192	4.634729	1492.1	376.7	368.8	5.931
42	15	629	R 7	1	M	2541	5.99645	3.41444	3.81309	4.901564	4.867534	4.574711	4.28069	5.252273	6.761573	5.257495	1702.6	424.7	278.4	6.051

42	15	630	R 7	1	M	2713	6.10925	3.51957	3.43881	4.959342	4.816241	4.60517	4.03795	5.501258	6.836259	4.890349	1749.6	450.0	364.7	6.109
42	16	631	R 3	1	F	2683	6.13556	3.51244	3.45884	5.036953	4.848116	4.644391	4.04340	5.220356	6.858565	4.718499	1676.9	433.2	397.7	6.071
42	16	632	R 3	1	F	2234	5.84644	3.42231	3.36661	4.848116	4.620059	4.477337	3.84567	5.198497	6.708084	4.543295	1461.1	364.9	279.7	5.900
42	17	633	R 7	2	M	2502	5.88053	3.29473	3.35236	4.983607	4.795791	4.494239	4.12471	5.170484	6.862758	4.60517	1613.7	396.4	346.5	5.982
42	17	634	R 7	2	M	2483	5.88888	2.79300	3.79211	4.959342	4.855929	4.60517	3.90600	5.337538	6.817831	4.442651	1455.3	533.1	254.2	6.279
42	18	635	R 7	2	F	2568	5.98645	3.20153	3.32143	4.997212	4.859812	4.68675	4.03866	5.365976	6.807935	4.770685	1711.1	435.9	293.3	6.077
42	18	636	R 7	2	F	2088	5.72359	3.43270	3.41181	4.736198	4.590057	4.304065	4.04813	5.327876	6.590301	4.867534	1358.3	336.7	276.5	5.819
42	19	637	C	1	M	2258	6.03787	3.09059	3.38269	4.879007	4.779123	4.521789	4.29415	4.744932	6.684612	4.584967	1553.1	403.5	206.9	6.000
42	19	638	C	1	M	1808	5.81114	3.04643	3.62167	4.521789	4.471639	4.212128	4.49513	4.191925	6.489205	4.290459	1081.4	296.7	255.8	5.693
42	20	639	H	2	F	2319	6.13123	3.49651	3.31782	4.894101	4.691348	4.60517	4.07022	5.049856	6.753438	3.258097	1393.7	492.1	353.5	6.199
42	20	640	H	2	F	2091	5.94542	3.21928	3.27185	4.744932	4.50535	4.430817	3.83773	5.308268	6.603944	4.477337	1394.5	322.0	226.2	5.774
42	21	641	H	3	M	2576	6.03069	3.01945	3.67731	5.030438	4.816241	4.553877	4.08480	5.01728	6.878326	4.744932	1674.4	432.2	423.7	6.069
42	21	642	H	3	M	2643	6.03069	3.69088	3.52518	5.062595	4.912655	4.564348	4.21405	5.030438	6.902743	4.553877	1649.5	484.6	423.0	6.183
42	22	643	R 3	2	F	2912	6.21860	3.59182	3.67731	5.144583	5.09375	4.610158	4.11741	5.351858	6.914731	4.60517	1753.0	494.9	415.2	6.204
42	22	644	R 3	2	F	2253	5.99396	3.18387	3.41444	4.832306	4.70048	4.269697	3.94835	5.283204	6.583409	5.062595	1443.3	392.4	331.6	5.972
42	23	645	R 3	2	M	2209	5.69709	3.02432	3.62461	4.863681	4.79165	4.454347	3.80666	5.09375	6.732211	4.532599	1475.6	353.8	227.4	5.869
42	23	646	R 3	2	M	3056	6.16752	3.03639	3.67706	5.147494	5.033701	4.663439	4.11774	5.572154	7.005789	4.672829	1948.3	491.5	417.2	6.198
42	24	647	H	1	F	2322	5.92693	3.08831	3.53689	4.927254	4.677491	4.49981	4.25192	5.141664	6.74876	4.418841	1476.0	372.0	353.9	5.919
42	24	648	H	1	F	1397	5.56068	2.90307	2.94602	4.369448	4.290459	4.060443	3.72280	4.025352	6.156979	4.75359	947.9	257.2	126.9	5.550
42	25	649	R 3	1	M	2911	6.15910	3.37554	3.49408	5.225747	5.020586	4.639572	4.19011	5.568345	6.899723	4.762174	2018.8	488.0	278.0	6.190
42	25	650	R 3	1	M	3294	6.20051	3.13680	3.89508	5.270432	5.072044	4.828314	4.36221	5.278115	7.118016	4.912655	2144.8	548.0	441.2	6.306
42	26	651	R 7	1	F	2377	5.92959	3.10772	3.30798	4.919981	4.649187	4.5486	4.09950	5.236442	6.758095	4.795791	1526.2	393.4	351.9	5.975
42	26	652	R 7	1	F	2631	6.03309	2.95335	3.59676	5.030438	4.804021	4.629863	4.07805	5.4161	6.811244	4.836282	1666.9	432.1	402.2	6.069
42	27	653	R 3	3	M	2613	5.88610	2.85704	3.41280	5.043425	4.714025	4.590057	4.34562	5.236442	6.869014	5.192957	1636.8	401.0	474.0	5.994
42	27	654	R 3	3	M	3161	6.09807	3.41707	3.62007	5.337538	5.204007	4.820282	4.29251	5.09375	7.061334	5.010635	1960.5	489.5	566.7	6.193
42	28	655	H	3	F	2174	5.98141	3.21004	3.15444	4.740575	4.579852	4.388257	3.88855	4.875197	6.639876	5.075174	1359.5	351.5	358.4	5.862
42	28	656	H	3	F	2017	5.76832	3.50285	3.47290	4.774913	4.448516	4.375757	3.85376	5.036953	6.597146	4.442651	1266.8	327.9	310.0	5.793
42	29	657	R 7	3	M	2570	5.92158	3.41082	3.32647	5.023881	4.855929	4.624973	4.06371	5.209486	6.878326	4.770685	1581.9	408.6	470.7	6.013
42	29	658	R 7	3	M	2410	5.54518	3.38439	3.24649	4.859812	4.824306	4.574711	4.00406	5.198497	6.881411	4.60517	1537.9	377.7	334.3	5.934
42	30	659	C	2	F	2502	6.06379	2.92477	3.65584	4.894101	4.663439	4.465908	4.04165	5.313206	6.76273	5.181784	1623.6	400.6	372.0	5.993
42	30	660	C	2	F	2242	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	4.912655	1402.6	373.5	363.2	5.923
42	31	661	H	2	M	2798	6.09582	3.02140	3.58740	5.007296	4.94876	4.584967	4.20484	5.204007	6.966967	5.030438	1769.7	447.9	405.2	6.105
42	31	662	H	2	M	2863	6.26340	3.65610	3.58629	5.096813	4.945207	4.442651	3.97462	5.068904	6.779922	4.976734	1839.3	474.5	415.7	6.162
42	32	663	R 3	3	F	1950	5.62762	2.86960	3.48032	4.744932	4.488636	4.269697	3.78283	4.983607	6.527958	4.990433	1239.1	325.0	289.0	5.784
42	32	664	R 3	3	F	1984	5.71043	3.47816	3.39685	4.70048	4.600158	4.317488	3.81463	5.003946	6.57647	4.543295	1263.4	346.8	271.6	5.849
42	33	665	C	2	M	2544	6.02102	3.06058	3.50014	4.97328	4.779123	4.465908	4.09218	4.969813	6.846943	4.488636	1668.6	429.4	300.5	6.062
42	33	666	C	2	M	2942	6.27288	3.49317	3.80399	5.053056	4.987025	4.68675	4.22362	5.26269	6.947937	5.010635	1899.3	479.3	369.9	6.172
42	34	667	R 7	3	F	2439	5.86079	3.04071	3.25347	4.983607	4.744932	4.488636	4.14043	5.365976	6.820016	4.672829	1477.5	373.5	444.6	5.923
42	34	668	R 7	3	F	2024	5.81114	3.07408	3.26652	4.779123	4.68675	4.330733	3.83622	5.01728	6.495266	4.882802	1314.4	338.7	239.3	5.825
42	35	669	H	1	M	2822	6.22059	3.26155	3.49953	5.108971	4.840242	4.691348	4.29374	5.267858	6.884487	4.882802	1866.4	478.5	309.5	6.171
42	35	670	H	1	M	3122	6.44731	3.63706	3.55535	5.170484	4.938065	4.75359	4.12568	5.327876	6.961296	4.836282	2076.9	550.8	330.6	6.311
42	36	671	C	3	F	2274	5.86647	2.77695	3.50405	4.859812	4.610158	4.527209	3.95086	5.332719	6.698268	4.454347	1405.7	350.5	356.5	5.859
42	36	672	C	3	F	2460	6.03309	3.42654	3.27639	5.053056	4.668145	4.51086	4.06749	5.030438	6.779922	4.905275	1483.9	378.5	457.5	5.936
42	37	673	R 3	3	M	1927	5.71373	3.04357	3.51333	4.620059	4.590057	4.26268	3.97594	5.117994	6.511745	4.454347	1321.3	319.5	204.9	5.767
42	37	674	R 3	3	M	1930	5.50533	2.89591	3.32827	4.718499	4.521789	4.304065	4.59350	4.60517	6.646391	4.356709	1184.5	331.2	279.7	5.803
42	38	675	R 7	3	F	2101	5.72031	2.67277	3.54241	4.731803	4.615121	4.412798	4.04024	5.111988	6.618739	4.969813	1347.3	343.3	289.2	5.839
42	38	676	R 7	3	F	2228	5.83773	2.98062	3.26194	4.832306	4.553877	4.418841	4.08514	5.147494	6.688355	4.691348	1400.1	355.9	344.0	5.875
42	39	677	H	2	M	2992	6.21860	3.73290	3.61362	5.020586	4.945207	4.60517	4.49970	5.549076	6.898715	4.844187	1929.5	507.0	375.4	6.229
42	39	678	H	2	M	2065	5.95064	2.82909	3.35166	4.682131	4.5486	4.337291	3.96537	4.919981	6.582025	4.804021	1360.2	347.1	248.1	5.850
42	40	679	R 7	1	F	2194	5.92158	2.82316	3.47103	4.824306	4.762174	4.400603	3.86430	5.123964	6.645091	4.532599	1427.2	357.3	305.0	5.878
42	40	680	R 7	1	F	2574	6.13556	3.17847	3.32611	4.987025	4.812184	4.615121	4.07906	5.111988	6.816736	4.60517	1643.3	431.0	334.3	6.066
42	41	681	R 7	3	M	2548	5.84932	2.95178	3.40685	4.983607	4.85203	4.590057	4.18190	5.181784	6.846943	4.990433	1564.1	405.0	404.3	6.004
42	41	682	R 7	3	M	1400	5.22575	3.05965	3.38167	4.337291	4.248495	4.102643	4.52948	4.122122	6.263398	3.806662	877.1	228.6	194.1	5.432
42	42	683	C	2	F	2427	6.13773	3.56671	3.47692	4.894101	4.722953	4.537961	4.06817	4.912655	6.766192	4.867534	1534.1	410.2	350.9	6.017
42	42	684	C	2	F	1240	5.22575	2.89481	2.91126	4.26268	4.077537	4.060443	3.43849	3.825157	6.171701	4.127134	798.1	226.7	162.3	5.424
42	43	685	C	1	M	2217	5.88053	2.98669	3.39719	4.787492	4.658711	4.488636	4.11529	5.01728	6.674561	4.75359	1512.8	357.6	219.3	5.879

42	43	686	C	1	M	2635	6.05678	3.26805	3.54154	4.919981	4.836282	4.51086	4.30569	5.17615	6.863803	4.976734	1638.4	423.3	388.2	6.048
42	44	687	H	3	F	2240	5.81413	3.52959	3.24064	4.840242	4.516339	4.412798	4.03583	5.247024	6.703188	5.075174	1405.3	#VALUE!	*	#VALUE!
42	44	688	H	3	F	1851	5.70378	3.14802	3.06058	4.615121	4.471639	4.317488	3.89975	4.912655	6.516193	4.330733	1198.2	320.6	245.7	5.770
42	45	689	R 3	2	M	2332	5.70378	3.39585	3.56728	4.799914	4.840242	4.454347	3.98416	5.117994	6.766192	5.043425	1559.2	385.4	268.5	5.954
42	45	690	R 3	2	M	2516	6.05912	3.26232	3.36936	4.879007	4.779123	4.600158	4.03123	5.214936	6.833032	4.787492	1670.5	362.5	268.5	5.893
42	46	691	R 3	3	F	2167	5.93754	3.43205	3.40983	4.705016	4.629863	4.317488	3.93339	5.043425	6.577861	4.787492	1348.1	#VALUE!	*	#VALUE!
42	46	692	R 3	3	F	2479	6.02345	3.38303	3.14415	4.905275	4.740575	4.564348	4.00951	5.236442	6.739337	5.236442	1537.4	#VALUE!	*	#VALUE!
42	47	693	C	3	M	2284	5.86079	3.19089	3.38879	4.919981	4.59512	4.442651	3.97462	5.068904	6.779922	4.543295	1474.0	350.1	318.1	5.858
42	47	694	C	3	M	2510	5.93489	3.49984	3.61658	4.848116	4.639572	4.424847	4.43793	4.567676	6.859615	4.615121	1566.4	409.9	394.2	6.016
42	48	695	R 3	2	F	2306	5.87493	3.36764	3.43495	4.766438	4.663439	4.388257	4.00570	5.55296	6.651572	4.969813	1467.8	377.4	324.7	5.933
42	48	696	R 3	2	F	2563	6.13556	3.72376	3.63601	5.000585	4.783316	4.471639	4.15857	5.402677	6.719013	5.003946	1615.9	473.0	380.0	6.159
56	1	801	R 7	2	M	4593	6.77765	4.00223	4.09384	5.68358	5.484797	5.20675	4.64439	5.811141	7.26892	5.225747	3060.2	806.3	436.6	6.692
56	1	802	R 7	2	M	4267	6.62672	3.41411	3.97048	5.44458	5.459586	5.068904	4.50557	5.717028	7.334982	5.075174	2819.1	778.6	430.2	6.657
56	2	803	C	3	F	3590	6.57647	4.08227	3.83471	5.361292	5.043425	4.890349	4.32612	5.370638	7.087574	5.204007	2057.9	584.7	687.5	6.371
56	2	804	C	3	F	3253	6.43294	3.85820	3.80221	5.049856	5.059425	4.855929	4.50965	5.01728	7.087574	4.727388	1889.9	547.0	543.4	6.305
56	3	805	C	2	M	4763	6.84482	4.37952	4.08497	5.605802	5.404927	5.214936	4.61512	5.517453	7.404888	5.298317	3008.4	796.9	684.4	6.681
56	3	806	C	2	M	4772	6.87109	3.75396	4.13517	5.55102	5.407172	5.147494	4.58159	5.666427	7.421776	5.616771	2932.7	815.1	708.2	6.703
56	4	807	R 3	1	F	3546	6.45362	3.98341	3.64100	5.320568	5.078294	4.871373	4.30434	5.55296	7.086738	5.298317	2196.1	585.6	538.0	6.373
56	4	808	R 3	1	F	3738	6.53814	4.00460	4.05161	5.404927	5.161925	4.879007	4.12082	5.793014	7.114769	5.164786	2302.5	605.6	566.7	6.406
56	5	809	H	3	M	4001	6.51767	3.89325	4.29347	5.365976	5.239098	5.123964	4.40891	5.283204	7.31322	5.187386	2407.7	657.4	676.9	6.488
56	5	810	H	3	M	4255	6.74641	4.09551	4.16060	5.484797	5.42715	5.043425	4.52559	5.365976	7.271009	5.198497	2546.2	701.8	738.1	6.554
56	6	811	C	1	F	3350	6.52942	3.39249	3.82035	5.265278	5.010635	4.808111	4.33257	5.463832	6.982863	5.209486	2064.7	590.5	483.9	6.381
56	6	812	C	1	F	3507	6.60123	3.82494	3.32324	5.214936	4.916325	4.890349	4.19720	5.55296	7.102499	5.170484	2180.5	580.8	530.8	6.364
56	7	813	R 3	1	M	4226	6.51471	3.78578	4.00223	5.457456	5.347108	4.990433	4.59026	6.028279	7.277248	5.123964	2806.0	728.2	452.3	6.591
56	7	814	R 3	1	M	4798	6.82979	4.22683	4.35965	5.655992	5.461711	5.108971	4.27221	5.869297	7.367077	5.393628	2776.1	875.4	827.8	6.775
56	8	815	H	2	F	3641	6.62672	3.80221	4.01854	5.370638	5.117994	4.923624	4.12955	5.181784	7.105786	5.375278	2266.0	590.2	577.6	6.380
56	8	816	H	2	F	3214	6.48768	3.94313	3.89182	5.111988	5.010635	4.695925	4.22829	5.438079	6.984716	5.087596	1981.6	521.6	503.6	6.257
56	9	817	H	1	M	4188	6.74406	4.13629	4.10016	5.4161	5.252273	5.043425	4.26676	5.420535	7.288244	5.087596	2659.8	697.8	587.2	6.548
56	9	818	H	1	M	3991	6.67834	3.55449	4.05958	5.398163	5.220356	4.969813	4.35965	5.866468	7.177782	4.744932	2676.7	722.6	388.2	6.583
56	10	819	R 7	2	F	3156	6.28413	3.70746	3.81881	5.187386	5.040194	4.762174	4.10380	5.384495	6.993015	5.159055	1933.2	521.3	470.1	6.256
56	10	820	R 7	2	F	3405	6.34914	3.57767	3.87598	5.192957	4.976734	4.844187	4.34950	5.942799	7.057898	5.17615	2135.5	556.9	503.1	6.322
56	11	821	R 7	1	M	4446	6.69084	3.84224	4.09000	5.58912	5.488938	5.144583	4.17777	5.638355	7.338888	5.192957	2855.5	761.4	579.1	6.635
56	11	822	R 7	1	M	4319	6.60935	4.42173	3.99305	5.463832	5.407172	5.036953	4.18129	5.749393	7.328437	5.402677	2685.4	704.9	644.9	6.558
56	12	823	H	1	F	3277	6.46459	4.04042	3.74147	5.283204	4.966335	4.848116	4.26535	5.293305	6.981935	5.252273	2064.9	564.2	462.9	6.335
56	12	824	H	1	F	3287	6.62936	3.65014	3.84117	5.159055	5.046646	4.766438	4.19795	5.476464	6.906755	5.147494	2205.1	569.3	340.9	6.344
56	13	825	C	3	M	3805	6.46925	3.44681	3.78214	5.435903	5.236442	4.927254	4.25391	5.655992	7.193686	5.075174	2341.2	601.5	652.4	6.399
56	13	826	C	3	M	4292	6.70808	3.69858	3.82668	5.590987	5.300814	5.010635	4.39420	5.700444	7.287561	5.068904	2687.8	733.6	607.3	6.598
56	14	827	C	1	F	3358	6.58893	4.00933	3.89752	5.363637	5.036953	4.886583	4.17945	4.905275	7.008505	4.934474	2016.5	552.1	567.9	6.314
56	14	828	C	1	F	3409	6.64118	3.91162	3.77803	5.198497	4.990433	4.855929	4.08883	5.31812	7.042286	4.962845	2055.9	564.0	564.0	6.335
56	15	829	R 7	1	M	4551	6.85857	3.99636	4.20230	5.556828	5.420535	5.013963	4.38040	6.001415	7.31055	4.828314	3044.0	799.3	477.0	6.684
56	15	830	R 7	1	M	3979	6.48616	4.13932	4.21936	5.32301	5.303305	5.023881	4.46268	5.739793	7.248504	5.204007	2492.9	689.2	545.0	6.536
56	16	831	R 3	1	F	3580	6.50279	3.68988	4.03936	5.288267	5.053056	4.844187	4.23222	5.874931	7.112327	4.836282	2194.2	578.7	573.3	6.361
56	16	832	R 3	1	F	3483	6.34036	3.80822	3.98472	5.395898	4.993828	4.795791	4.30204	5.758902	7.096721	5.438079	2004.3	546.6	682.7	6.304
56	17	833	R 7	2	M	3818	6.46147	3.34568	3.95757	5.370638	5.225747	4.990433	4.36602	5.843544	7.226209	5.068904	2506.3	648.0	431.3	6.474
56	17	834	R 7	2	M	4093	6.54535	3.45695	4.22931	5.420535	5.354225	5.065755	4.42903	5.433722	7.285507	5.181784	2590.8	681.4	512.1	6.524
56	18	835	R 7	2	F	3463	6.36303	3.61711	3.80109	5.280662	5.20675	4.808111	4.33218	5.852202	7.028201	5.062595	2204.6	578.9	446.6	6.361
56	18	836	R 7	2	F	3286	6.32257	3.54299	3.81021	5.159055	5.059425	4.840242	4.24305	5.613128	6.991177	5.313206	2059.8	539.5	484.6	6.291
56	19	837	C	1	M	4479	6.77651	3.78601	4.00406	5.521461	5.46806	5.161925	4.53850	5.793014	7.27448	5.42495	2905.9	834.2	454.3	6.727
56	19	838	C	1	M	4125	6.73578	3.60767	4.01277	5.386786	5.351858	5.072044	4.38589	5.659482	7.241366	5.01728	2570.9	743.3	554.3	6.611
56	20	839	H	2	F	3810	6.77992	3.79256	3.64257	5.453182	5.105945	4.927254	4.14994	5.365976	7.120444	5.288267	2321.2	634.5	646.4	6.453
56	20	840	H	2	F	2962	6.25575	3.20761	3.68009	5.090678	4.962845	4.783316	3.97349	5.442418	6.910751	5.010635	1869.5	493.6	404.6	6.202
56	21	841	H	3	M	4257	6.72503	4.04760	4.02927	5.509388	5.351858	5.020586	4.36374	5.42495	7.358831	5.117994	2591.2	704.1	668.3	6.557
56	21	842	H	3	M	3852	6.44254	3.84524	3.87577	5.431536	5.244389	4.990433	4.05854	5.308268	7.286876	5.170484	2371.9	634.6	547.7	6.453
56	22	843	R 3	2	F	3148	6.40192	3.77781	3.71698	5.117994	5.023881	4.682131	4.14883	5.652489	6.958448	5.023881	2045.2	553.7	398.0	6.317
56	22	844	R 3	2	F	3348	6.33859	3.85270	3.78578	5.244389	5.075174	4.787492	4.32228	5.669881	7.046647	5.043425	2002.6	532.0	502.9	6.277
56	23	845	R 3	2	M	4284	6.56103	3.97255	3.91202	5.558757	5.42495	5.01728	4.27694	5.583496	7.311218	5.517453	2705.4	704.0	606.3	6.557

56	23	846	R 3	2	M	4444	6.67330	3.95316	4.24935	5.46806	5.320568	5.033701	4.51086	5.902633	7.358831	5.303305	2764.2	784.0	621.5	6.664
56	24	847	H	1	F	3301	6.49224	4.02464	3.71722	5.233779	4.993828	4.740575	4.05370	5.252273	7.089243	5.247024	2033.1	538.4	497.8	6.289
56	24	848	H	1	F	3394	6.53379	3.30101	3.72666	5.209486	4.983607	4.75359	4.33100	5.293305	7.086738	5.135798	2040.4	540.0	563.7	6.292
56	25	849	R 3	1	M	4162	6.52503	3.64231	4.03742	5.455321	5.407172	5.023881	4.58211	5.743003	7.271009	5.153292	2586.8	775.0	517.6	6.653
56	25	850	R 3	1	M	4092	6.49677	3.82668	4.21582	5.293305	5.382199	5.027165	4.36856	5.666427	7.340836	5.55296	2366.8	636.7	814.9	6.456
56	26	851	R 7	1	F	3196	6.28600	3.88712	3.57683	5.195731	4.993828	4.762174	4.48672	5.549076	6.947937	5.117994	1923.3	549.0	532.4	6.308
56	26	852	R 7	1	F	3264	6.33328	3.69312	3.90460	5.300814	5.090678	4.808111	4.10462	5.613128	6.955593	5.187386	2025.9	547.8	476.2	6.306
56	27	853	R 3	3	M	4077	6.44413	3.92671	4.19870	5.529429	5.365976	4.955827	4.27458	5.720312	7.287561	5.087596	2443.4	663.1	685.3	6.497
56	27	854	R 3	3	M	4294	6.41999	4.05491	4.12665	5.57973	5.411646	5.059425	4.33441	5.723585	7.362011	5.451038	2629.0	696.0	730.2	6.545
56	28	855	H	3	F	3336	6.41346	3.83881	3.65765	5.315666	5.043425	4.824306	4.23048	5.411646	7.032624	4.976734	2041.8	541.0	532.0	6.293
56	28	856	H	3	F	3317	6.41346	3.87120	3.75420	5.090678	4.959342	4.816241	4.14789	5.26269	7.098376	5.192957	2031.4	561.0	495.8	6.330
56	29	857	R 7	3	M	4163	6.52796	3.88465	4.26113	5.533389	5.402677	5.007296	4.49825	5.420535	7.342779	4.976734	2584.4	681.7	549.6	6.525
56	29	858	R 7	3	M	4312	6.51619	3.99930	3.98546	5.513429	5.438079	5.046646	4.48255	5.869297	7.355641	5.030438	2731.9	716.1	581.0	6.574
56	30	859	C	2	F	3893	6.77079	4.22347	3.90600	5.507362	5.132853	4.890349	4.27555	5.347108	7.109062	5.402677	2348.9	645.5	623.1	6.470
56	30	860	C	2	F	3263	6.48616	3.55363	3.61604	5.233779	5.000585	4.824306	4.22742	5.273	7.053586	5.049856	2039.4	533.2	480.0	6.279
56	31	861	H	2	M	3971	6.74641	4.21464	3.85841	5.320568	5.20675	5.003946	4.35466	5.220356	7.252054	5.062595	2499.5	673.7	524.5	6.513
56	31	862	H	2	M	4083	6.76504	3.27336	4.06903	5.395898	5.285739	4.94876	4.61512	5.852202	7.216709	5.010635	2759.5	733.1	388.5	6.597
56	32	863	R 3	3	F	3056	6.00389	3.67199	4.20842	5.150397	4.976734	4.766438	4.11005	5.31812	7.079184	4.934474	1879.8	473.6	465.9	6.160
56	32	864	R 3	3	F	3393	6.36130	3.84652	3.80109	5.293305	5.053056	4.795791	4.24978	5.627621	7.111512	4.787492	2029.3	530.1	606.0	6.273
56	33	865	C	2	M	4297	6.76273	4.07499	4.13469	5.664695	5.372961	5.129899	4.32532	5.616771	7.282761	4.488636	*	#VALUE!	*	#VALUE!
56	33	866	C	2	M	3755	6.38688	3.72666	4.13405	5.377591	5.153292	4.980176	4.40648	5.733341	7.192934	5.153292	2437.0	684.1	431.7	6.528
56	34	867	R 7	3	F	3361	6.28786	3.96897	3.66638	5.280662	5.081404	4.89784	4.20110	5.46806	7.061334	5.455321	1971.3	533.7	624.8	6.280
56	34	868	R 7	3	F	2634	6.10032	3.66868	3.53164	4.923624	4.820282	4.749271	4.08866	5.123964	6.846943	4.85203	1626.7	435.6	401.5	6.077
56	35	869	H	1	M	4173	6.68461	3.60141	3.86283	5.48272	5.349486	5.096813	4.38875	5.799093	7.259116	4.990433	2826.7	761.2	374.0	6.635
56	35	870	H	1	M	4214	6.79347	3.89508	4.12180	5.501258	5.313206	5.010635	4.36361	5.755742	7.221836	5.204007	2814.7	718.4	422.1	6.577
56	36	871	C	3	F	3433	6.44413	4.02749	3.73886	5.257495	5.084505	4.840242	4.27708	5.036953	7.148346	5.036953	1993.9	547.0	659.9	6.304
56	36	872	C	3	F	3394	6.51026	3.91222	3.81991	5.27556	4.938065	4.749271	4.35825	5.257495	7.095893	5.062595	2022.7	537.6	607.7	6.287
56	37	873	R 3	3	M	3855	6.43455	4.10973	4.07669	5.320568	5.236442	4.993828	4.39334	5.480639	7.25347	5.111988	2369.7	603.9	647.6	6.403
56	37	874	R 3	3	M	3819	6.41017	3.67681	3.90801	5.370638	5.220356	4.983607	4.15466	5.549076	7.244942	5.429346	*	#VALUE!	*	*
56	38	875	R 7	3	F	3663	6.41999	4.18859	3.92178	5.344724	5.223055	4.905275	4.46095	5.342334	7.149132	5.231109	2382.9	610.4	422.9	6.414
56	38	876	R 7	3	F	2984	6.09131	3.72473	3.53310	5.123964	4.980176	4.574711	4.12017	5.517453	6.919684	5.638355	1728.8	462.1	594.5	6.136
56	39	877	H	2	M	4413	6.70441	3.93691	4.28552	5.455321	5.298317	5.059425	4.30014	5.700444	7.375256	5.484797	2754.4	759.1	628.3	6.632
56	39	878	H	2	M	4216	6.68211	3.87120	3.71844	5.531411	5.320568	5.114995	4.31829	5.545177	7.255591	5.568345	2634.8	684.2	631.4	6.528
56	40	879	R 7	1	F	3368	6.44572	3.77161	3.71965	5.209486	5.033701	4.718499	4.25505	5.924256	6.995766	5.010635	2205.9	562.8	415.1	6.333
56	40	880	R 7	1	F	3512	6.45990	3.95986	3.53339	5.305789	5.007296	4.799914	4.45667	5.327876	7.160846	5.267858	2005.0	552.7	693.5	6.315
56	41	881	R 7	3	M	4712	6.63595	3.88445	4.43331	5.529429	5.537334	5.129899	4.49569	5.823046	7.447168	5.164786	2887.1	775.2	765.2	6.653
56	41	882	R 7	3	M	4150	6.61473	4.07974	4.02963	5.535364	5.3303	4.962845	4.43308	5.645447	7.27448	5.192957	2561.8	684.5	652.5	6.529
56	42	883	C	2	F	3279	6.47697	3.24103	3.71284	5.298317	4.993828	4.766438	4.13645	5.505332	7.005789	5.023881	2068.9	559.0	423.4	6.326
56	42	884	C	2	F	3388	6.60935	3.86136	3.47041	5.20675	5.056246	4.836282	3.95278	5.66296	6.920672	5.225747	2118.6	552.4	465.8	6.314
56	43	885	C	1	M	4298	6.83303	3.77092	3.86891	5.562603	5.440251	5.078294	4.39099	5.63479	7.198184	5.332719	2809.3	781.5	462.2	6.661
56	43	886	C	1	M	4385	6.69950	4.19071	4.23048	5.480639	5.305789	5.192957	4.38888	5.768321	7.247793	5.068904	2798.9	745.0	591.3	6.613
56	44	887	H	3	F	2992	6.23832	3.56417	3.52164	4.9523	4.783316	4.65396	4.04042	4.990433	6.890609	6.047372	1882.2	512.3	429.6	6.239
56	44	888	H	3	F	2881	6.46770	3.53864	3.75701	5.007296	4.916325	4.672829	4.03866	5.164786	6.792344	5.225747	1916.8	486.9	338.1	6.188
56	45	889	R 3	2	M	3753	6.45362	3.85820	3.90600	5.375278	5.293305	4.863681	4.32387	5.780744	7.163172	5.153292	2495.0	626.9	432.4	6.441
56	45	890	R 3	2	M	3598	6.40688	3.28653	4.18859	5.280662	5.254888	4.912655	4.31935	5.568345	7.189168	4.828314	2403.0	635.3	339.9	6.454
56	46	891	R 3	3	F	3322	6.40853	3.76399	3.98192	5.187386	4.997212	4.894101	4.31308	5.476464	7.068172	5.111988	2036.4	560.7	524.9	6.329
56	46	892	R 3	3	F	3898	6.56103	4.17960	4.00223	5.451038	5.313206	4.908972	4.33834	5.624018	7.192182	5.099866	2312.3	599.2	700.9	6.396
56	47	893	C	3	M	3801	6.45990	3.97612	3.76097	5.384495	5.123964	4.871373	4.45272	5.356586	7.258412	5.198497	2266.8	629.5	635.0	6.445
56	47	894	C	3	M	4895	7.05790	3.97781	4.19464	5.577841	5.402677	4.816241	4.55682	5.480639	7.412764	5.303305	3088.5	809.7	740.4	6.697
56	48	895	R 3	2	F	2952	6.30079	3.58102	3.66484	5.078294	4.908972	4.59512	4.10429	5.497168	6.873164	5.252273	1873.4	459.3	380.8	6.130
56	48	896	R 3	2	F	3100	6.31355	3.37039	3.77574	5.167639	4.901564	4.766438	4.29401	5.32301	7.022868	5.075174	1912.7	449.4	516.7	6.108
70	1	1001	R 7	2	M	4579	6.52942	3.54904	4.08782	5.503297	5.400423	5.084505	4.39925	6.021023	7.407924	5.669881	2887.4	808.7	611.9	6.695
70	1	1002	R 7	2	M	5879	7.09672	3.86932	4.26648	5.891644	5.625821	5.332719	4.56861	6.113682	7.570959	5.690359	3729.1	1063.2	755.5	6.969
70	2	1003	C	3	F	4534	6.76041	4.26605	3.91602	5.58912	5.335131	5.013963	4.69135	5.46806	7.411556	5.342334	2458.2	699.2	1061.3	6.550
70	2	1004	C	3	F	4487	6.95655	4.22362	4.00879	5.575949	5.293305	5.078294	4.56653	5.288267	7.316548	5.402677	2640.6	747.4	806.1	6.617
70	3	1005	C	2	M	4748	6.87730	4.01151	4.45446	5.647212	5.493061	5.225747	4.26282	5.147494	7.382124	5.659482	2925.1	911.0	610.8	6.815

70	3	1006	C	2	M	5426	7.06647	4.20065	4.10611	5.771441	5.616771	5.260096	4.31909	5.843544	7.49443	5.493061	3284.8	963.4	786.7	6.871
70	4	1007	R 3	1	F	3485	6.24804	3.74218	3.96916	5.195731	5.013963	4.9523	4.37299	5.814131	7.130099	5.32301	2042.3	564.7	631.2	6.336
70	4	1008	R 3	1	F	3638	6.66313	3.92257	4.01656	5.305789	5.241747	4.894101	4.05560	5.620401	6.991177	5.703782	2256.8	633.2	499.2	6.451
70	5	1009	H	3	M	5442	6.94890	4.31066	4.04445	5.870708	5.574053	5.293305	4.36131	5.598422	7.575072	5.241747	3384.2	911.1	831.2	6.815
70	5	1010	H	3	M	5536	7.14045	4.36144	4.41401	5.811141	5.55102	5.265278	4.54170	5.805135	7.478735	5.673323	3346.9	939.8	869.3	6.846
70	6	1011	C	1	F	4299	6.83518	4.42903	4.06714	5.493061	5.170484	4.955827	4.47461	5.389072	7.336286	5.17615	2462.5	711.3	800.5	6.567
70	6	1012	C	1	F	4024	6.84801	3.91820	4.06646	5.386786	5.27556	5.003946	4.11822	5.888878	7.102499	5.075174	2670.7	739.2	419.8	6.606
70	7	1013	R 3	1	M	5357	6.91175	3.97650	4.19328	5.671604	5.620401	5.31074	4.45922	5.968708	7.520776	5.613128	3398.6	967.8	556.4	6.875
70	7	1014	R 3	1	M	4672	6.86171	4.13260	4.41086	5.654242	5.472271	5.087596	4.94876	5.241747	7.383989	5.451038	2884.9	834.8	620.4	6.727
70	8	1015	H	2	F	4443	6.77765	3.99028	3.97856	5.533389	5.400423	5.023881	4.21759	5.693732	7.311886	5.505332	2632.5	730.7	761.6	6.594
70	8	1016	H	2	F	4691	6.92067	4.39790	3.82690	5.640132	5.413876	5.075174	4.44933	5.726848	7.34601	5.273	2700.0	779.8	906.3	6.659
70	9	1017	H	1	M	5705	7.19519	4.20305	4.18006	5.880533	5.741399	5.363637	4.40244	5.459586	7.512071	5.556828	3618.3	1034.7	678.7	6.942
70	9	1018	H	1	M	5343	6.96508	4.21050	4.05213	5.734958	5.590987	5.315666	4.50424	5.826	7.537963	5.347108	3520.1	940.7	551.1	6.847
70	10	1019	R 7	2	F	4207	6.68336	4.18159	3.88794	5.407172	5.26269	4.966335	4.43308	5.805135	7.325149	5.298317	2328.7	640.6	908.5	6.462
70	10	1020	R 7	2	F	4777	6.73697	4.05004	3.88362	5.624018	5.465948	5.132853	4.51273	5.717028	7.511525	5.204007	2537.5	722.3	1073.5	6.582
70	11	1021	R 7	1	M	4810	6.83733	3.85566	4.20365	5.517453	5.664695	5.260096	4.61512	5.996452	7.347944	5.393628	3296.1	946.2	334.2	6.852
70	11	1022	R 7	1	M	5395	6.94216	4.11562	4.32731	5.68358	5.590987	5.298317	4.40660	5.783825	7.556951	5.493061	3331.7	902.2	825.5	6.805
70	12	1023	H	1	F	4584	6.98193	4.08261	4.03936	5.478553	5.313206	5.010635	4.49524	5.686975	7.303843	5.545177	2714.0	717.6	826.0	6.576
70	12	1024	H	1	F	4141	6.82655	4.33925	4.12099	5.451038	5.135798	4.945207	4.26619	5.398163	7.266827	5.123964	2549.8	#VALUE!	*	*
70	13	1025	C	3	M	4944	6.54103	3.82821	4.09034	5.666427	5.363637	5.111988	4.35234	5.908083	7.390181	5.32301	3074.8	856.5	693.9	6.753
70	13	1026	C	3	M	5356	7.10168	3.58157	4.20170	5.720312	5.472271	5.303305	4.46142	5.968708	7.462215	5.545177	3368.7	906.3	739.3	6.809
70	14	1027	C	1	F	4345	6.81783	3.81198	4.10775	5.491002	5.305789	5.135798	4.30999	5.613128	7.261225	5.525453	2624.4	719.1	682.4	6.578
70	14	1028	C	1	F	3684	6.64249	4.06526	3.69536	5.214936	5.249652	4.945207	4.16294	5.375278	7.150701	5.257495	2224.6	625.3	626.5	6.438
70	15	1029	R 7	1	M	5043	6.68835	4.03777	4.09534	5.640132	5.572154	5.308268	4.45225	5.863631	7.46049	5.459586	3128.0	800.8	673.5	6.686
70	15	1030	R 7	1	M	5476	6.99118	3.64310	4.23801	5.752573	5.640132	5.300814	4.40964	5.916202	7.554859	5.613128	3457.2	984.1	718.8	6.892
70	16	1031	R 3	1	F	3231	6.37673	3.18718	3.71162	5.141664	5.062595	4.787492	4.01350	5.356586	7.008505	5.361292	1981.9	559.3	408.2	6.327
70	16	1032	R 3	1	F	4040	6.59304	4.07295	3.94158	5.398163	5.129899	4.919981	4.31134	5.929589	7.216709	5.545177	2305.9	642.6	807.8	6.465
70	17	1033	R 7	2	M	4983	6.82002	4.01638	4.34133	5.616771	5.668155	5.214936	4.56226	5.843544	7.443078	5.342334	3080.5	928.2	592.0	6.833
70	17	1034	R 7	2	M	5182	6.81454	4.12131	4.41546	5.718671	5.7301	5.225747	4.35491	5.55296	7.51915	5.613128	3064.1	826.9	874.8	6.718
70	18	1035	R 7	2	F	4074	6.42487	3.81198	3.59676	5.543222	5.499215	5.087596	4.29606	5.673323	7.254885	5.293305	2556.0	671.9	583.1	6.510
70	18	1036	R 7	2	F	3920	6.65286	4.30000	3.93554	5.463832	5.201256	4.867534	4.26409	5.765191	7.123673	5.4161	2377.6	643.8	607.8	6.467
70	19	1037	C	1	M	5628	6.96224	4.45621	4.10132	5.863631	5.523459	5.325446	4.44265	5.805135	7.618251	5.517453	3319.3	941.5	1003.1	6.848
70	19	1038	C	1	M	3422	6.60800	3.47166	4.12196	5.457456	5.225747	5.023881	4.17853	4.225665	7.01661	5.036953	2119.8	720.7	425.4	6.580
70	20	1039	H	2	F	3837	6.71901	3.68988	3.73337	5.315666	5.181784	5.075174	3.99948	5.488938	7.156177	5.398163	2313.2	630.8	681.7	6.447
70	20	1040	H	2	F	4377	6.87213	2.09924	4.00058	5.537334	5.209486	4.976734	4.50645	5.587249	7.248504	5.509388	2443.2	649.6	930.6	6.476
70	21	1041	H	3	M	5122	6.78672	3.55420	4.23324	5.782286	5.470168	5.305789	4.51972	5.602119	7.559038	5.46806	3071.7	829.4	861.3	6.721
70	21	1042	H	3	M	5707	7.11721	4.60517	4.44770	5.936216	5.631212	5.32301	4.57800	5.497168	7.582738	6.169611	3407.0	935.4	977.6	6.841
70	22	1043	R 3	2	F	4184	6.64118	4.38328	4.01800	5.36831	5.265278	4.990433	4.35850	5.891644	7.23201	5.645447	2480.3	710.5	706.1	6.566
70	22	1044	R 3	2	F	4339	6.73221	4.33454	3.78100	5.465948	5.31074	4.955827	4.46820	5.598422	7.327781	5.497168	2421.5	661.8	995.8	6.495
70	23	1045	R 3	2	M	6008	7.00488	3.78895	4.32836	5.839187	5.673323	5.305789	4.62497	6.212606	7.618742	5.852202	3616.4	963.8	*	6.871
70	23	1046	R 3	2	M	5277	6.87316	4.00897	4.44746	5.596568	5.629418	5.337538	4.48672	5.68358	7.524561	5.780744	3075.5	874.3	1046.9	6.773
70	24	1047	H	1	F	4017	6.63726	3.45537	3.68311	5.4161	5.126936	4.980176	4.46683	5.484797	7.26892	5.31812	2260.0	672.4	803.8	6.511
70	24	1048	H	1	F	4122	6.86066	4.13324	3.75771	5.384495	5.342334	5.043425	4.22888	5.147494	7.224753	5.370638	2473.3	699.1	578.1	6.550
70	25	1049	R 3	1	M	3331	6.27476	3.47538	4.00278	5.265278	5.244389	4.997212	4.55377	4.718499	7.13966	4.890349	2094.3	683.4	368.1	6.527
70	25	1050	R 3	1	M	5381	6.93342	4.27555	4.43224	5.678465	5.746203	5.327876	4.44922	5.942799	7.506592	5.32301	3460.6	1009.9	559.4	6.918
70	26	1051	R 7	1	F	3934	6.53524	4.08396	4.01530	5.313206	5.090678	4.886583	4.44676	5.971262	7.153052	5.66296	2419.3	646.3	580.7	6.471
70	26	1052	R 7	1	F	4291	6.67708	4.00022	4.16216	5.384495	5.270432	4.990433	4.27944	5.627621	7.283448	5.717028	2487.8	724.1	715.0	6.585
70	27	1053	R 3	3	M	5940	6.94312	4.38028	4.16589	5.840642	5.805135	5.363637	4.77912	5.765191	7.68156	5.659482	3479.5	991.9	1083.4	6.900
70	27	1054	R 3	3	M	5999	7.12448	2.73761	4.55797	5.922918	5.763622	5.278115	4.51612	6.068426	7.587311	5.393628	3734.9	1025.9	830.3	6.933
70	28	1055	H	3	F	3675	6.60935	3.96784	3.89792	5.228431	5.081404	4.959342	4.14075	5.693732	7.053586	5.509388	2251.4	646.4	568.6	6.471
70	28	1056	H	3	F	4178	6.71417	4.16636	4.10000	5.455321	5.280662	5.265278	4.33034	5.616771	7.207119	5.638355	2382.7	657.5	856.3	6.488
70	29	1057	R 7	3	M	5451	6.90274	4.01114	4.11415	5.762051	5.556828	5.254888	4.44875	5.488938	7.643962	5.594711	3221.8	917.6	910.0	6.822
70	29	1058	R 7	3	M	5580	6.72863	4.22610	4.14282	5.850765	5.607639	5.26269	4.87520	5.998937	7.643004	5.624018	3282.3	880.3	1011.4	6.780
70	30	1059	C	2	F	3801	6.59304	3.87245	3.87536	5.3303	5.132853	4.923624	4.09933	5.723585	7.160069	5.379897	2329.7	608.0	617.3	6.410
70	30	1060	C	2	F	4222	6.80017	4.37865	3.95929	5.395898	5.161925	4.976734	4.31174	5.545177	7.277248	5.509388	2415.1	689.2	809.5	6.535
70	31	1061	H	2	M	5204	6.95559	3.91999	4.04006	5.688669	5.433722	5.260096	4.56653	5.733341	7.558517	5.153292	3113.6	859.1	835.7	6.756

70	31	1062	H	2	M	5583	7.11558	4.08497	4.49602	5.839187	5.605802	5.254888	4.31642	6.102559	7.48493	5.181784	3650.7	975.9	625.5	6.883
70	32	1063	R 3	3	F	4414	6.66950	2.93386	3.94294	5.375278	5.214936	5.007296	4.43426	6.047372	7.364547	5.655992	2547.3	717.9	855.8	6.576
70	32	1064	R 3	3	F	4237	6.55678	4.31241	3.76167	5.554896	5.402677	5.033701	4.24377	5.680173	7.277248	5.575949	2463.8	696.6	775.5	6.546
70	33	1065	C	2	M	4746	7.06048	3.89345	4.33284	5.607639	5.472271	5.244389	4.22771	5.153292	7.357556	5.332719	3051.7	859.6	620.5	6.757
70	33	1066	C	2	M	4566	6.87109	3.81573	3.97875	5.596568	5.440251	5.167639	4.21020	5.342334	7.338238	5.537334	2781.7	838.9	714.5	6.732
70	34	1067	R 7	3	F	4160	6.64769	3.43978	3.67046	5.358942	5.278115	4.9523	4.45621	5.924256	7.254178	5.669881	2446.7	698.0	727.0	6.548
70	34	1068	R 7	3	F	3985	6.57228	3.32755	3.97029	5.375278	5.209486	4.993828	4.37450	5.733341	7.270313	5.32301	2051.1	755.7	920.5	6.628
70	35	1069	H	1	M	5271	6.94698	3.63442	4.26141	5.695414	5.55102	5.260096	4.60016	5.370638	7.549083	5.631212	3225.5	975.5	770.5	6.883
70	35	1070	H	1	M	5692	7.14598	4.16698	4.40769	5.7301	5.55296	5.298317	4.63473	5.937536	7.475339	5.720312	3670.3	1024.9	609.4	6.932
70	36	1071	C	3	F	3111	6.44095	3.73337	3.44649	5.132853	4.919981	4.68675	3.79796	5.42495	6.948897	5.370638	1876.2	505.9	504.2	6.226
70	36	1072	C	3	F	4251	6.65673	3.12148	3.82777	5.478553	5.117994	4.912655	4.37802	5.673323	7.325149	5.55296	2322.5	661.1	911.7	6.494
70	37	1073	R 3	3	M	5089	6.65673	4.25320	4.51765	5.577841	5.547129	5.187386	4.67283	6.09357	7.504942	5.517453	3206.4	865.0	830.9	6.763
70	37	1074	R 3	3	M	4894	6.66058	4.23527	4.07278	5.726848	5.503297	5.239098	4.58985	5.820083	7.47817	5.455321	3150.1	825.6	677.4	6.716
70	38	1075	R 7	3	F	4125	6.54391	3.20559	3.99820	5.347108	5.01728	4.875197	4.05612	5.913503	7.338888	5.620401	2316.1	610.2	838.3	6.414
70	38	1076	R 7	3	F	4541	6.68211	3.64048	3.91701	5.507362	5.295814	5.053056	4.46901	5.826	7.456455	5.356586	2590.9	725.8	908.6	6.587
70	39	1077	H	2	M	5179	6.91572	4.27054	4.35234	5.757323	5.574053	5.217649	4.36843	5.4161	7.458186	5.771441	3088.7	916.9	820.4	6.821
70	39	1078	H	2	M	5513	7.06476	4.24921	4.34692	5.794537	5.652489	5.236442	4.56414	5.823046	7.428927	5.736572	3581.7	989.3	623.0	6.897
70	40	1079	R 7	1	F	3716	6.50578	3.92750	3.68009	5.198497	5.072044	4.85203	4.27235	5.805135	7.194437	5.384495	2105.8	583.3	714.2	6.369
70	40	1080	R 7	1	F	4611	6.63988	4.17562	4.18616	5.574053	5.285739	5.068904	4.38726	5.897154	7.361375	5.793014	2627.2	733.3	797.1	6.598
70	41	1081	R 7	3	M	4576	6.74759	4.17254	4.25618	5.63479	5.46806	5.081404	4.49346	5.891644	7.340836	5.241747	2839.1	814.5	693.3	6.703
70	41	1082	R 7	3	M	5681	6.77765	4.70048	4.28730	5.831882	5.72195	5.404927	4.35504	5.686975	7.698483	5.501258	3274.9	938.9	1087.6	6.845
70	42	1083	C	2	F	4541	7.06987	4.19961	3.99636	5.562603	5.303305	4.923624	4.38028	5.877736	7.27448	5.231109	2832.0	791.8	727.5	6.674
70	42	1084	C	2	F	4092	6.77079	4.26056	3.97406	5.440251	5.3303	4.997212	4.24864	5.342334	7.257708	5.043425	2237.1	679.7	780.3	6.522
70	43	1085	C	1	M	4845	7.13250	3.85015	4.08210	5.681878	5.55296	5.247024	4.65396	4.602467	7.301822	5.56452	3281.8	910.2	434.0	6.814
70	43	1086	C	1	M	5412	6.79122	3.27261	4.07465	5.527443	5.497168	5.247024	4.38652	5.594711	7.451242	5.805135	3513.5	921.9	652.0	6.826
70	44	1087	H	3	F	4503	6.88551	4.33047	4.10545	5.592851	5.342334	5.108971	4.23382	5.446737	7.255591	5.666427	2712.4	773.8	746.1	6.651
70	44	1088	H	3	F	3867	6.58755	4.10825	4.10644	5.283204	5.156178	4.945207	4.17007	5.46806	7.197435	5.537334	2282.0	674.0	616.2	6.513
70	45	1089	R 3	2	M	5543	6.83841	4.05751	4.07584	5.809643	5.717028	5.31074	4.58272	6.028279	7.500529	5.799093	3502.2	1015.4	818.8	6.923
70	45	1090	R 3	2	M	4926	6.83303	3.92553	4.05785	5.625821	5.44458	5.170484	4.50921	5.932245	7.41397	5.556828	3119.7	890.1	654.3	6.791
70	46	1091	R 3	3	F	4296	6.67330	4.44582	3.66791	5.572154	5.26269	4.976734	4.29032	5.484797	7.360104	5.501258	2341.2	687.8	970.9	6.534
70	46	1092	R 3	3	F	4678	6.73934	4.40367	3.79997	5.562603	5.48272	5.096813	4.75359	5.703782	7.366445	5.752573	2502.7	719.8	975.4	6.579
70	47	1093	C	3	M	5426	7.10003	4.21464	3.92829	5.743003	5.465948	5.120983	4.47665	5.991465	7.41216	5.726848	3486.9	936.5	682.3	6.842
70	47	1094	C	3	M	5647	7.07242	4.30676	4.37500	5.963579	5.614951	5.247024	4.61512	5.63479	7.54539	5.46806	3364.1	974.7	990.0	6.882
70	48	1095	R 3	2	F	3570	6.48004	3.06386	3.75138	5.313206	5.090678	4.844187	4.31080	5.710427	7.084226	5.560682	2213.9	634.0	504.0	6.452
70	48	1096	R 3	2	F	4751	6.96791	4.07073	3.90822	5.523459	5.513429	5.090678	4.45202	5.455321	7.418781	5.283204	2827.8	834.6	784.4	6.727
84	1	1201	R 7	2	M	5491	6.83087	3.44903	4.34264	5.712081	5.676754	5.391352	4.41353	5.976351	7.624619	5.308268	3561.1	1009.8	475.0	6.918
84	1	1202	R 7	2	M	5872	7.01481	4.24449	4.35079	5.746203	5.70877	5.420535	4.62497	6.163315	7.601902	5.533389	3839.9	1014.6	627.7	6.922
84	2	1203	C	3	F	4869	6.91771	4.12261	3.82799	5.633002	5.252273	5.190175	4.82831	5.497168	7.438972	5.666427	2585.5	760.7	1127.3	6.634
84	2	1204	C	3	F	4900	6.95177	4.59138	4.06783	6.12796	5.365976	5.114995	4.44922	5.693732	7.410952	5.293305	2768.7	814.2	1050.1	6.702
84	3	1205	C	2	M	5150	6.99760	4.21568	4.42209	5.925592	5.529429	5.178971	4.58985	5.181784	7.457032	5.545177	3347.9	973.3	577.6	6.881
84	3	1206	C	2	M	5835	7.13170	4.29579	4.43153	5.881929	5.678465	5.305789	4.53507	5.918894	7.582229	5.480639	3541.2	910.3	884.1	6.814
84	4	1207	R 3	1	F	2728	6.27099	3.20680	3.67503	5.065755	5.043425	4.430817	3.66919	4.828314	6.883463	4.584967	1716.8	507.4	339.3	6.229
84	4	1208	R 3	1	F	5117	7.06476	3.88136	3.96348	5.493061	5.495117	4.894101	4.58527	5.950643	7.433667	5.758902	2974.3	912.7	785.1	6.816
84	5	1209	H	3	M	6795	7.20860	4.58904	4.32678	5.934894	5.849325	5.384495	4.66344	5.66296	7.825645	5.602119	4004.4	1129.8	1127.9	7.030
84	5	1210	H	3	M	7000	7.51316	4.70048	4.59714	6.130139	5.821566	5.517453	4.50480	5.765191	7.661056	5.370638	4245.0	1251.8	1027.7	7.132
84	6	1211	C	1	F	5271	7.16162	4.15309	4.01728	5.796058	5.42715	5.308268	4.19283	5.42495	7.487734	4.418841	2999.9	887.9	1060.2	6.789
84	6	1212	C	1	F	5339	7.07581	4.47232	3.72425	5.831882	5.370638	5.225747	4.59046	5.843544	7.49276	5.361292	3183.9	892.5	828.3	6.794
84	7	1213	R 3	1	M	6048	7.22184	4.23295	4.11887	5.800607	5.70877	5.379897	4.44242	5.953243	7.514255	5.587249	3742.2	1149.1	783.7	7.047
84	7	1214	R 3	1	M	6958	7.29845	4.55671	4.65396	6.142037	5.942799	5.535364	4.74493	6.100319	7.702556	5.57973	4536.7	1186.7	842.4	7.079
84	8	1215	H	2	F	5441	7.11477	4.55703	3.82035	5.558757	5.575949	5.220356	4.70953	5.942799	7.516977	5.402677	3094.6	868.2	1084.9	6.766
84	8	1216	H	2	F	4845	6.89669	4.00588	3.93828	5.668155	5.509388	5.159055	4.30407	5.56452	7.426549	5.204007	2796.4	813.6	850.7	6.702
84	9	1217	H	1	M	6673	7.29709	4.46786	4.25887	6.008813	5.817111	5.478553	4.56028	5.932245	7.690743	5.613128	3937.8	1372.4	913.7	7.224
84	9	1218	H	1	M	5548	6.98101	4.28469	4.28977	5.898527	5.703782	5.335131	4.67283	5.488938	7.537963	5.46806	3542.3	1044.4	630.1	6.951
84	10	1219	R 7	2	F	4909	6.80904	3.91761	3.71137	5.545177	5.344724	5.150397	4.33297	5.897154	7.534763	5.26269	2737.9	752.8	1083.1	6.624
84	10	1220	R 7	2	F	5419	6.84268	4.58924	3.95910	5.583496	5.592851	5.228431	4.71850	5.886104	7.616776	5.529429	2832.7	742.6	1420.4	6.610
84	11	1221	R 7	1	M	6225	7.18159	4.34081	4.45353	5.777652	5.703782	5.398163	4.40733	6.196444	7.631432	5.455321	3956.1	1094.4	810.8	6.998

84	11	1222	R 7	1	M	5340	6.90675	4.43758	4.55177	5.688669	5.713733	5.420535	4.61512	5.214936	7.577634	5.620401	3183.2	973.4	744.0	6.881
84	12	1223	H	1	F	4735	6.89568	4.43046	3.85079	5.583496	5.293305	5.072044	4.51426	5.63479	7.469654	5.214936	2619.2	741.1	1010.1	6.608
84	12	1224	H	1	F	5471	7.21818	4.40709	3.90641	5.700444	5.393628	5.252273	4.54148	5.924256	7.407318	5.78996	*	#VALUE!	*	#VALUE!
84	13	1225	C	3	M	5928	6.99760	4.25035	4.29620	5.902633	5.63479	5.332719	4.65396	6.159095	7.589842	5.638355	3674.1	1015.3	840.1	6.923
84	13	1226	C	3	M	5814	7.11964	4.61512	4.37198	5.953243	5.609472	5.288267	4.60517	5.620401	7.596392	5.686975	3481.0	1017.3	985.4	6.925
84	14	1227	C	1	F	5167	7.06133	3.67984	4.14151	5.762051	5.325446	5.209486	4.42281	5.713733	7.488853	5.476464	3022.4	816.0	1014.8	6.704
84	14	1228	C	1	F	5113	7.16935	3.56161	4.03123	5.647212	5.356586	5.108971	4.30149	5.726848	7.38461	5.572154	3125.9	841.8	784.6	6.736
84	15	1229	R 7	1	M	5811	7.05186	4.40220	4.55860	5.855072	5.655992	5.295814	4.70048	6.09357	7.512071	5.758902	3658.0	1051.9	793.8	6.958
84	15	1230	R 7	1	M	6363	7.11558	4.49446	4.42807	6.053265	5.844993	5.505332	4.58262	5.942799	7.612337	5.70711	4016.9	1129.8	609.2	7.030
84	16	1231	R 3	1	F	3803	6.70073	3.68311	3.78123	5.525453	5.220356	5.068904	3.79504	5.003946	7.16472	5.056246	2181.9	659.0	574.8	6.491
84	16	1232	R 3	1	F	4962	6.82979	4.32121	4.32585	5.731722	5.422745	5.239098	4.39136	5.624018	7.474772	5.525453	2858.1	782.2	872.2	6.662
84	17	1233	R 7	2	M	5692	7.12448	3.50736	4.00951	5.902633	5.598422	5.361292	4.22318	5.872118	7.555905	5.55296	3597.0	1083.8	653.5	6.988
84	17	1234	R 7	2	M	5561	6.92363	4.37827	4.47847	5.933571	5.58912	5.247024	5.03695	5.433722	7.615298	5.342334	3395.5	986.0	754.2	6.894
84	18	1235	R 7	2	F	4747	6.72022	4.50491	4.15009	5.645447	5.497168	5.129899	4.38950	5.843544	7.342132	5.826	2508.9	712.1	1118.3	6.568
84	18	1236	R 7	2	F	4546	6.59167	3.56048	3.85206	5.697093	5.411646	5.220356	4.47358	5.733341	7.425954	5.288267	2505.7	711.2	947.3	6.567
84	19	1237	C	1	M	6599	7.27170	4.23280	4.28082	6.052089	5.805135	5.558757	4.78749	6.126869	7.584773	5.820083	4504.3	1161.3	571.3	7.057
84	19	1238	C	1	M	6563	7.19369	4.40988	4.36602	5.968708	5.802118	5.616771	5.37064	5.641907	7.711549	5.529429	4242.5	1145.8	721.3	7.044
84	20	1239	H	2	F	4293	6.89264	4.37021	4.04708	5.543222	5.42495	5.159055	4.06079	4.859812	7.271704	5.247024	2416.4	743.4	837.7	6.611
84	20	1240	H	2	F	4820	6.90875	4.32506	3.75724	5.734958	5.404927	5.164786	4.19449	5.365976	7.425358	5.488938	2617.8	755.1	1000.2	6.627
84	21	1241	H	3	M	6276	7.29029	4.28977	4.39420	5.831882	5.717028	5.433722	4.65396	5.476464	7.706163	5.4161	3743.7	1102.4	905.5	7.005
84	21	1242	H	3	M	4071	6.75809	3.81132	4.41353	5.58912	5.493061	5.123964	4.46476	4.75359	7.172425	5.181784	2487.1	851.4	489.7	6.747
84	22	1243	R 3	2	F	4763	6.82655	4.38303	3.68988	5.686975	5.453182	5.059425	4.30149	5.655992	7.424165	5.347108	2809.0	795.3	815.7	6.679
84	22	1244	R 3	2	F	4911	6.87420	4.49312	4.27833	5.605802	5.459586	5.159055	4.15841	5.379897	7.502186	5.459586	2600.6	761.4	1078.7	6.635
84	23	1245	R 3	2	M	6343	7.08087	4.08665	4.67283	6.149536	5.776103	5.459586	4.54319	5.828946	7.629976	5.713733	3962.7	1147.6	824.7	7.045
84	23	1246	R 3	2	M	6037	6.96224	4.65396	4.07567	6.022236	5.728475	5.488938	4.61512	5.869297	7.579679	5.786897	3428.8	978.0	1171.8	6.885
84	24	1247	H	1	F	5195	7.12930	4.55209	4.14298	5.766757	5.308268	5.144583	4.42293	5.560682	7.443664	5.568345	*	#VALUE!	*	#VALUE!
84	24	1248	H	1	F	5939	7.21671	3.92277	3.98935	5.914853	5.575949	5.349486	4.75359	5.831882	7.532088	5.521461	3502.5	959.1	979.6	6.866
84	25	1249	R 3	1	M	5252	6.74524	3.78055	4.31294	5.618588	5.55102	5.335131	5.01728	5.926926	7.580189	5.361292	3233.2	842.3	705.3	6.736
84	25	1250	R 3	1	M	7048	7.40306	4.42125	4.60517	5.818598	5.80664	5.44458	4.57883	6.063785	7.812378	5.693732	4116.4	1304.6	908.5	7.174
84	26	1251	R 7	1	F	5117	6.74876	4.32797	4.30163	5.717028	5.463832	5.231109	4.41534	5.988961	7.471363	5.690359	3002.8	821.4	865.2	6.711
84	26	1252	R 7	1	F	5161	7.04752	4.48323	4.37399	5.692047	5.474369	5.147494	4.58823	5.955837	7.426549	5.267858	2932.1	838.6	919.3	6.732
84	27	1253	R 3	3	M	6873	7.17549	4.55071	4.65396	6.075346	5.831882	5.596568	4.65396	6.165418	7.747165	5.7301	4284.8	1194.6	960.5	7.086
84	27	1254	R 3	3	M	6575	7.13966	4.47072	4.40903	6.04382	5.853638	5.420535	4.62497	5.921578	7.756195	5.590987	3918.3	1177.6	939.9	7.071
84	28	1255	H	3	F	5021	6.93828	4.29987	3.73050	5.611302	5.509388	5.209486	4.12600	5.631212	7.533694	5.198497	2793.2	869.6	720.0	6.768
84	28	1256	H	3	F	4823	7.05962	4.35543	3.97312	5.686975	5.267858	5.099866	4.33192	5.209486	7.448916	5.267858	2718.3	791.9	944.7	6.674
84	29	1257	R 7	3	M	7098	7.12609	4.33624	4.36144	5.997695	5.942799	5.558757	4.71850	6.156979	7.867871	5.808142	4314.6	1170.4	896.8	7.065
84	29	1258	R 7	3	M	6572	7.13010	4.70048	4.56560	5.874931	5.805135	5.519459	4.60126	5.945421	7.78904	5.609472	3863.8	1082.0	648.6	6.987
84	30	1259	C	2	F	4687	6.91274	3.29398	3.92691	5.609472	5.484797	5.267858	4.15309	5.57973	7.344719	5.455321	2655.0	765.2	807.0	6.640
84	30	1260	C	2	F	4672	7.01661	4.27277	4.02571	5.603962	5.285739	5.000585	4.44910	5.420535	7.3518	5.429346	2769.4	764.1	627.6	6.639
84	31	1261	H	2	M	5656	7.03262	4.18281	4.56944	5.752573	5.48272	5.365976	4.74493	6.070738	7.566311	5.493061	3555.3	983.4	672.5	6.891
84	31	1262	H	2	M	5705	7.06476	4.35453	4.24291	5.853638	5.607639	5.484797	4.52201	5.631212	7.550661	5.472271	3556.2	1016.7	590.9	6.924
84	32	1263	R 3	3	F	4982	6.82871	4.45933	4.02231	5.618588	5.503297	5.138735	4.64439	5.594711	7.48493	5.525453	2744.6	815.2	905.8	6.703
84	32	1264	R 3	3	F	5142	6.82979	4.45551	4.42257	5.669881	5.429346	5.280662	4.54351	5.572154	7.551712	5.631212	2907.0	778.6	824.8	6.658
84	33	1265	C	2	M	5810	7.19293	4.15795	4.37488	5.993961	5.690359	5.474369	4.48017	5.697093	7.46164	5.697093	3637.5	1034.5	480.0	6.942
84	33	1266	C	2	M	6603	7.06561	4.46683	4.22829	6.070738	5.820083	5.478553	4.87520	5.905362	7.760041	5.774552	3792.5	1069.6	979.3	6.975
84	34	1267	R 7	3	F	4014	6.63988	3.81397	3.71479	5.463832	5.247024	5.290789	4.39962	5.739793	7.228388	5.231109	2350.7	632.5	648.3	6.450
84	34	1268	R 7	3	F	4963	6.90174	3.85524	3.89406	5.56452	5.592851	5.249652	4.47472	5.717028	7.459915	5.42495	2795.2	788.1	885.9	6.670
84	35	1269	H	1	M	7042	7.49387	4.49245	4.73620	6.139885	5.921578	5.560682	4.75359	5.929589	7.621685	5.56452	4720.6	1323.1	407.3	7.188
84	35	1270	H	1	M	6637	7.42417	3.92711	4.33362	5.963579	5.723585	5.507362	4.81218	5.814131	7.673223	5.505332	4171.8	1148.6	763.2	7.046
84	36	1271	C	3	F	5177	7.05704	4.53935	4.03495	5.622211	5.433722	5.247024	4.39716	5.598422	7.50769	5.393628	3035.8	807.6	713.7	6.694
84	36	1272	C	3	F	4331	6.87523	3.55877	3.77735	5.382199	5.220356	4.983607	4.16868	5.283204	7.4313	5.220356	2221.1	702.8	1006.0	6.555
84	37	1273	R 3	3	M	6097	6.92363	4.19374	4.24907	6.021023	5.859361	5.391352	4.69135	5.517453	7.665285	5.537334	3847.8	993.9	482.0	6.902
84	37	1274	R 3	3	M	5802	6.97073	4.40562	4.40928	5.969986	5.720312	5.386786	4.41074	6.109248	7.571474	5.545177	3558.4	994.7	792.7	6.902
84	38	1275	R 7	3	F	5408	6.99760	3.64806	4.04533	5.728475	5.44458	5.212215	4.31802	5.945421	7.575072	5.616771	2878.7	808.4	967.1	6.695
84	38	1276	R 7	3	F	4692	6.52796	4.45667	4.09950	5.685279	5.351858	5.114995	4.44992	5.886104	7.445418	5.594711	3096.7	866.2	448.5	6.764
84	39	1277	H	2	M	6181	7.25347	3.87929	4.16372	5.932245	5.78843	5.529429	4.59117	5.55296	7.65302	5.631212	0.0	#VALUE!	*	*

84	39	1278	H	2	M	6441	7.25064	4.35337	4.17423	5.815622	5.783825	5.429346	4.59411	5.849325	7.754482	5.455321	3807.6	1098.9	951.3	7.002
84	40	1279	R 7	1	F	4061	6.62936	3.73552	3.93104	5.525453	5.347108	5.003946	4.03442	5.42495	7.251345	5.55296	2294.3	642.3	627.8	6.465
84	40	1280	R 7	1	F	4438	6.75460	4.35105	3.88691	5.453182	5.288267	5.030438	4.37915	5.872118	7.336286	5.361292	2475.2	804.8	559.9	6.691
84	41	1281	R 7	3	M	6125	6.84055	4.53528	4.71850	5.944111	5.733341	5.523459	4.54563	5.966147	7.744137	5.347108	3564.6	994.4	950.6	6.902
84	41	1282	R 7	3	M	5681	6.81235	3.56218	4.22171	5.833348	5.752573	5.293305	4.65396	5.771441	7.626083	5.869297	2976.1	1075.4	924.4	6.980
84	42	1283	C	2	F	4994	6.90975	4.10545	4.03901	5.821566	5.404927	5.147494	4.30420	5.545177	7.489412	5.384495	2741.2	777.7	756.2	6.656
84	42	1284	C	2	F	4715	7.00941	4.58149	4.03724	5.697093	5.36831	5.153292	4.10380	5.26269	7.381502	5.257495	2619.9	770.7	883.8	6.647
84	43	1285	C	1	M	6679	7.22911	4.36755	4.66344	5.963579	5.821566	5.501258	4.70048	5.758902	7.77191	5.690359	4457.2	951.6	776.9	6.858
84	43	1286	C	1	M	6913	7.37337	4.40415	4.52027	6.010041	5.844993	5.433722	4.69135	6.285998	7.642524	5.83773	3499.6	966.3	1555.5	6.873
84	44	1287	H	3	F	5144	6.84375	3.78419	3.74289	5.769882	5.575949	5.170484	4.65396	5.605802	7.569928	5.356586	2909.2	719.2	974.4	6.578
84	44	1288	H	3	F	5452	7.24708	4.66344	4.05387	5.830415	5.497168	5.195731	4.54457	5.429346	7.483807	5.420535	3266.0	907.6	544.9	6.811
84	45	1289	R 3	2	M	6235	6.95940	4.23469	4.23004	5.975081	5.087596	5.486869	4.71850	5.918894	7.699389	5.529429	3799.7	1008.8	1008.2	6.917
84	45	1290	R 3	2	M	5130	6.76273	4.37198	4.24664	5.669881	5.535364	5.320568	4.70953	5.575949	7.555382	5.459586	3056.3	856.5	718.7	6.753
84	46	1291	R 3	3	F	4772	6.66058	4.40794	3.93143	5.535364	5.484797	5.150397	4.45097	5.389072	7.576097	5.327876	2462.0	696.5	1088.5	6.546
84	46	1292	R 3	3	F	5083	6.84694	4.55619	3.79841	5.812637	5.457456	5.161925	4.61512	5.869297	7.440147	5.583496	2865.9	787.7	781.4	6.669
84	47	1293	C	3	M	6515	7.26613	4.65396	4.47095	6.123589	5.771441	5.457456	4.66344	5.556828	7.639642	5.771441	4010.9	1090.0	905.3	6.994
84	47	1294	C	3	M	6486	7.16007	4.61512	4.40976	5.946729	5.68358	5.491002	4.94876	5.641907	7.720905	5.883322	3747.6	1027.3	984.6	6.935
84	48	1295	R 3	2	F	4510	6.65929	4.02767	3.63310	5.594711	5.407172	5.059425	4.60086	5.950643	7.309881	5.680173	2615.3	745.7	710.5	6.614
84	48	1296	R 3	2	F	4858	6.83948	4.45272	4.10198	5.661223	5.339939	5.198497	4.43734	5.958425	7.372118	5.42495	2787.1	749.5	792.2	6.619

Appendix Chapter 5

Analysis of Variance of main effects, two-way and three-way interactions of water, protein and lipid contents of the breast, thigh, drum and wing meat and skin over 8 weeks period.

Analysis of variance for lipid in breast meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	62.0645	62.0645	20.6882	21.98	0.000
Feed	3	10.6899	10.6899	3.5633	3.79	0.024
Sex	1	4.5450	4.5450	4.5450	4.83	0.038
Strain	2	4.0495	4.0495	2.0248	2.15	0.138
Age*Feed	9	12.9831	12.9831	1.4426	1.53	0.193
Age*Sex	3	2.6441	2.6441	0.8814	0.94	0.438
Age*Strain	6	5.4659	5.4659	0.9110	0.97	0.468
Feed*Sex	3	1.5052	1.5052	0.5017	0.53	0.664
Feed*Strain	6	1.6551	1.6551	0.2759	0.29	0.934
Sex*Strain	2	1.0227	1.0227	0.5113	0.54	0.588
Age*Feed*Sex	9	2.0626	2.0626	0.2292	0.24	0.984
Age*Feed*Strain	18	13.7122	13.7122	0.7618	0.81	0.674
Feed*Sex*Strain	6	1.7754	1.7754	0.2959	0.31	0.923
Error	24	22.5895	22.5895	0.9412		
Total	95	146.7647				

S = 0.970170   R-Sq = 84.61%   R-Sq(adj) = 39.07%

Least squares means for lipid in breast meat

Age	Mean	SE Mean
14	3.046	0.1980
28	4.453	0.1980
42	4.902	0.1980
56	5.107	0.1980
Feed		
1	4.187	0.1980
2	3.969	0.1980
3	4.497	0.1980
4	4.856	0.1980
Sex		
F	4.595	0.1400
M	4.160	0.1400
Strain		
C	4.625	0.1715
H	4.122	0.1715
R	4.386	0.1715

Analysis of variance for lipid in breast skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	1038.28	915.80	305.27	16.49	0.000
Feed	3	1043.31	997.96	332.65	17.96	0.000
Sex	1	660.13	692.67	692.67	37.41	0.000
Strain	2	224.80	223.44	111.72	6.03	0.008
Age*Feed	9	156.33	176.13	19.57	1.06	0.429
Age*Sex	3	199.57	212.19	70.73	3.82	0.023
Age*Strain	6	87.66	64.60	10.77	0.58	0.741
Feed*Sex	3	37.72	46.23	15.41	0.83	0.490
Feed*Strain	6	65.78	53.82	8.97	0.48	0.813
Sex*Strain	2	20.62	14.75	7.37	0.40	0.676
Age*Feed*Sex	9	252.74	259.66	28.85	1.56	0.187
Age*Feed*Strain	18	528.95	538.93	29.94	1.62	0.138
Feed*Sex*Strain	6	117.12	117.12	19.52	1.05	0.418
Error	23	425.88	425.88	18.52		
Total	94	4858.90				

S = 4.30311   R-Sq = 91.23%   R-Sq(adj) = 64.18%

Least squares means for lipid in breast skin

Age	Mean	SE Mean
14	44.97	0.8784
28	46.12	0.8784
42	51.03	0.8784
56	52.48	0.9487
Feed		
1	45.13	0.8784
2	46.14	0.8784
3	50.07	0.9487
4	53.26	0.8784
Sex		
F	51.39	0.6211
M	45.91	0.6465
Strain		
C	50.54	0.7607
H	46.80	0.7607
R	48.61	0.8068

Analysis of variance for lipid in thigh meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	118.771	112.700	37.567	5.88	0.004
Feed	3	263.542	230.979	76.993	12.05	0.000
Sex	1	40.327	42.742	42.742	6.69	0.017
Strain	2	80.298	76.594	38.297	5.99	0.008
Age*Feed	9	72.940	67.729	7.525	1.18	0.356
Age*Sex	3	8.143	8.361	2.787	0.44	0.729
Age*Strain	6	73.897	62.631	10.439	1.63	0.185
Feed*Sex	3	31.689	32.428	10.809	1.69	0.198
Feed*Strain	6	62.789	56.910	9.485	1.48	0.230
Sex*Strain	2	37.181	33.612	16.806	2.63	0.095
Age*Feed*Sex	9	84.198	79.456	8.828	1.38	0.255
Age*Feed*Strain	18	132.614	134.769	7.487	1.17	0.358
Feed*Sex*Strain	6	71.451	71.451	11.909	1.86	0.133
Error	22	140.604	140.604	6.391		
Total	93	1218.444				

S = 2.52806   R-Sq = 88.46%   R-Sq(adj) = 51.22%

Least squares means for lipid in thigh meat

Age	Mean	SE Mean
14	15.41	0.5160
28	17.47	0.5160
42	18.49	0.5574
56	16.83	0.5574
Feed		
1	14.51	0.5574
2	16.71	0.5160
3	18.05	0.5160
4	18.92	0.5574
Sex		
F	17.74	0.3941
M	16.35	0.3649
Strain		
C	15.91	0.4469
H	17.02	0.4469
R	18.22	0.4997

Analysis of variance for lipid in thigh skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	2730.99	2771.76	923.92	20.33	0.000
Feed	3	635.88	547.50	182.50	4.01	0.021
Sex	1	213.16	242.89	242.89	5.34	0.031
Strain	2	197.08	147.10	73.55	1.62	0.222
Age*Feed	9	321.84	336.76	37.42	0.82	0.602
Age*Sex	3	102.08	117.74	39.25	0.86	0.475
Age*Strain	6	163.91	142.05	23.67	0.52	0.786
Feed*Sex	3	168.56	186.47	62.16	1.37	0.280
Feed*Strain	6	218.59	217.52	36.25	0.80	0.582
Sex*Strain	2	121.00	154.01	77.01	1.69	0.208
Age*Feed*Sex	9	541.99	506.50	56.28	1.24	0.325
Age*Feed*Strain	18	962.01	907.93	50.44	1.11	0.406
Feed*Sex*Strain	6	148.69	148.69	24.78	0.55	0.768
Error	21	954.59	954.59	45.46		
Total	92	7480.39				

S = 6.74216   R-Sq = 87.24%   R-Sq(adj) = 44.09%

Least squares means for lipid in thigh skin

Age	Mean	SE Mean
14	49.44	1.376
28	54.99	1.490
42	60.67	1.592
56	63.71	1.376
Feed		
1	55.71	1.561
2	53.94	1.376
3	59.61	1.487
4	59.55	1.376
Sex		
F	58.88	1.040
M	55.52	1.013
Strain		
C	59.04	1.266
H	56.57	1.266
R	56.00	1.264

Analysis of variance for lipid in drum meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	165.022	146.548	48.849	21.01	0.000
Feed	3	72.121	56.234	18.745	8.06	0.001
Sex	1	0.044	0.544	0.544	0.23	0.633
Strain	2	1.734	4.275	2.137	0.92	0.414
Age*Feed	9	26.363	27.835	3.093	1.33	0.278
Age*Sex	3	23.184	22.350	7.450	3.20	0.043
Age*Strain	6	22.212	23.466	3.911	1.68	0.173
Feed*Sex	3	17.249	17.223	5.741	2.47	0.089
Feed*Strain	6	19.836	25.384	4.231	1.82	0.142
Sex*Strain	2	4.339	6.626	3.313	1.42	0.262
Age*Feed*Sex	9	23.092	23.246	2.583	1.11	0.396
Age*Feed*Strain	18	85.494	83.834	4.657	2.00	0.061
Feed*Sex*Strain	6	14.392	14.392	2.399	1.03	0.432
Error	22	51.153	51.153	2.325		
Total	93	526.236				

S = 1.52484   R-Sq = 90.28%   R-Sq(adj) = 58.91%

Least squares means for lipid in drum meat

Age	Mean	SE Mean
14	6.635	0.3113
28	8.821	0.3113
42	8.642	0.3113
56	10.547	0.4018
Feed		
1	7.826	0.4018
2	8.399	0.3113
3	8.409	0.3113

4	10.011	0.3113
Sex		
F	8.743	0.2541
M	8.580	0.2201
Strain		
C	8.587	0.2912
H	8.960	0.2912
R	8.437	0.2696

Analysis of variance for lipid in drum skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	4202.77	4202.77	1400.92	45.39	0.000
Feed	3	1016.60	1016.60	338.87	10.98	0.000
Sex	1	572.16	572.16	572.16	18.54	0.000
Strain	2	445.01	445.01	222.50	7.21	0.004
Age*Feed	9	475.31	475.31	52.81	1.71	0.141
Age*Sex	3	317.58	317.58	105.86	3.43	0.033
Age*Strain	6	346.72	346.72	57.79	1.87	0.127
Feed*Sex	3	87.69	87.69	29.23	0.95	0.434
Feed*Strain	6	165.59	165.59	27.60	0.89	0.515
Sex*Strain	2	116.93	116.93	58.46	1.89	0.172
Age*Feed*Sex	9	330.38	330.38	36.71	1.19	0.346
Age*Feed*Strain	18	401.95	401.95	22.33	0.72	0.757
Feed*Sex*Strain	6	135.43	135.43	22.57	0.73	0.629
Error	24	740.78	740.78	30.87		
Total	95	9354.90				

S = 5.55569   R-Sq = 92.08%   R-Sq(adj) = 68.66%

Least squares means for lipid in drum skin

Age	Mean	SE Mean
14	35.83	1.1341
28	42.18	1.1341
42	49.66	1.1341
56	52.84	1.1341
Feed		
1	41.26	1.1341
2	43.51	1.1341
3	45.66	1.1341
4	50.08	1.1341
Sex		
F	47.57	0.8019
M	42.69	0.8019
Strain		
C	47.49	0.9821
H	42.28	0.9821
R	45.62	0.9821

Analysis of variance for lipid in wing meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	115.368	100.436	33.479	16.61	0.000

Feed	3	54.195	32.746	10.915	5.42	0.007
Sex	1	42.334	44.819	44.819	22.24	0.000
Strain	2	5.646	4.089	2.045	1.01	0.381
Age*Feed	9	27.627	28.463	3.163	1.57	0.195
Age*Sex	3	40.201	34.647	11.549	5.73	0.006
Age*Strain	6	4.449	5.742	0.957	0.47	0.819
Feed*Sex	3	2.357	3.784	1.261	0.63	0.607
Feed*Strain	6	7.426	8.245	1.374	0.68	0.666
Sex*Strain	2	2.423	0.627	0.313	0.16	0.857
Age*Feed*Sex	9	21.065	15.991	1.777	0.88	0.558
Age*Feed*Strain	18	54.520	59.627	3.313	1.64	0.146
Feed*Sex*Strain	6	13.629	13.629	2.271	1.13	0.384
Error	19	38.296	38.296	2.016		
Total	90	429.536				

S = 1.41971   R-Sq = 91.08%   R-Sq(adj) = 57.77%

Least squares means for lipid in wing meat

Age	Mean	SE Mean
14	8.010	0.2898
28	9.542	0.3352
42	10.687	0.3137
56	10.526	0.3346
Feed		
1	8.791	0.3130
2	9.399	0.3130
3	10.180	0.3429
4	10.397	0.3130
Sex		
F	10.439	0.2293
M	8.944	0.2216
Strain		
C	9.630	0.2943
H	9.461	0.2666
R	9.984	0.2666

Analysis of variance for lipid in wing skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	4186.45	3719.88	1239.96	25.80	0.000
Feed	3	489.51	520.82	173.61	3.61	0.029
Sex	1	219.61	246.08	246.08	5.12	0.034
Strain	2	124.48	111.98	55.99	1.17	0.330
Age*Feed	9	138.88	113.73	12.64	0.26	0.978
Age*Sex	3	39.01	48.41	16.14	0.34	0.800
Age*Strain	6	228.90	219.58	36.60	0.76	0.608
Feed*Sex	3	92.90	105.83	35.28	0.73	0.543
Feed*Strain	6	104.48	113.87	18.98	0.39	0.874
Sex*Strain	2	15.05	19.72	9.86	0.21	0.816
Age*Feed*Sex	9	294.91	288.01	32.00	0.67	0.730
Age*Feed*Strain	18	484.00	483.55	26.86	0.56	0.893
Feed*Sex*Strain	6	66.38	66.38	11.06	0.23	0.962
Error	22	1057.34	1057.34	48.06		
Total	93	7541.92				

S = 6.93261   R-Sq = 85.98%   R-Sq(adj) = 40.74%

Least squares means for lipid in wing skin

Age	Mean	SE Mean
14	28.30	1.415
28	31.48	1.528
42	40.52	1.415
56	44.20	1.528
Feed		
1	34.44	1.415
2	35.16	1.528
3	34.52	1.415
4	40.38	1.528
Sex		
F	37.79	1.041
M	34.46	1.041
Strain		
C	37.06	1.300
H	34.58	1.226
R	36.74	1.300

Analysis of variance for water in breast meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	227.9618	227.9618	75.9873	141.89	0.000
Feed	3	5.2658	5.2658	1.7553	3.28	0.038
Sex	1	5.2182	5.2182	5.2182	9.74	0.005
Strain	2	7.4941	7.4941	3.7471	7.00	0.004
Age*Feed	9	7.4135	7.4135	0.8237	1.54	0.191
Age*Sex	3	2.7409	2.7409	0.9136	1.71	0.192
Age*Strain	6	4.9425	4.9425	0.8237	1.54	0.209
Feed*Sex	3	0.6425	0.6425	0.2142	0.40	0.754
Feed*Strain	6	5.4723	5.4723	0.9121	1.70	0.164
Sex*Strain	2	0.3482	0.3482	0.1741	0.33	0.726
Age*Feed*Sex	9	2.6132	2.6132	0.2904	0.54	0.829
Age*Feed*Strain	18	14.6761	14.6761	0.8153	1.52	0.166
Feed*Sex*Strain	6	1.8803	1.8803	0.3134	0.59	0.739
Error	24	12.8529	12.8529	0.5355		
Total	95	299.5222				

S = 0.731803   R-Sq = 95.71%   R-Sq(adj) = 83.01%

Least squares means for water in breas meat

Age	Mean	SE Mean
14	74.33	0.1494
28	71.59	0.1494
42	70.99	0.1494
56	70.24	0.1494
Feed		
1	72.17	0.1494
2	71.64	0.1494
3	71.77	0.1494
4	71.57	0.1494
Sex		
F	71.56	0.1056

M	72.02	0.1056
Strain		
C	71.43	0.1294
H	72.12	0.1294
R	71.81	0.1294

Analysis of variance for water in breast skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	1008.579	910.792	303.597	51.56	0.000
Feed	3	528.052	510.111	170.037	28.88	0.000
Sex	1	368.438	387.571	387.571	65.82	0.000
Strain	2	110.106	108.023	54.012	9.17	0.001
Age*Feed	9	112.747	124.322	13.814	2.35	0.048
Age*Sex	3	108.200	114.318	38.106	6.47	0.002
Age*Strain	6	66.963	44.836	7.473	1.27	0.310
Feed*Sex	3	29.863	36.727	12.242	2.08	0.131
Feed*Strain	6	30.201	32.866	5.478	0.93	0.492
Sex*Strain	2	7.984	7.064	3.532	0.60	0.557
Age*Feed*Sex	9	111.319	116.641	12.960	2.20	0.061
Age*Feed*Strain	18	196.235	198.934	11.052	1.88	0.078
Feed*Sex*Strain	6	22.495	22.495	3.749	0.64	0.700
Error	23	135.439	135.439	5.889		
Total	94	2836.623				

S = 2.42665   R-Sq = 95.23%   R-Sq(adj) = 80.49%

Least squares means for water in breast skin

Age	Mean	SE Mean
14	44.47	0.4953
28	41.64	0.4953
42	37.82	0.4953
56	36.47	0.5350
Feed		
1	42.00	0.4953
2	42.39	0.4953
3	39.38	0.5350
4	36.64	0.4953
Sex		
F	38.05	0.3503
M	42.15	0.3646
Strain		
C	38.83	0.4290
H	41.42	0.4290
R	40.05	0.4550

Analysis of variance for water in thigh meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	219.61	224.76	74.92	5.84	0.004
Feed	3	181.30	188.30	62.77	4.89	0.009
Sex	1	63.17	67.19	67.19	5.24	0.032
Strain	2	112.76	112.33	56.16	4.38	0.024
Age*Feed	9	105.21	104.25	11.58	0.90	0.539
Age*Sex	3	61.40	60.92	20.31	1.58	0.221

Age*Strain	6	131.73	130.63	21.77	1.70	0.167
Feed*Sex	3	66.37	64.46	21.49	1.68	0.200
Feed*Strain	6	137.36	123.57	20.59	1.61	0.191
Sex*Strain	2	60.46	63.54	31.77	2.48	0.106
Age*Feed*Sex	9	145.12	146.40	16.27	1.27	0.305
Age*Feed*Strain	18	214.76	213.94	11.89	0.93	0.560
Feed*Sex*Strain	6	107.05	107.05	17.84	1.39	0.260
Error	23	294.98	294.98	12.83		
Total	94	1901.29				

S = 3.58125   R-Sq = 84.49%   R-Sq(adj) = 36.59%

Least squares means for water in thigh meat

Age	Mean	SE Mean
14	66.92	0.7310
28	64.71	0.7310
42	62.69	0.7310
56	63.95	0.7896
Feed		
1	66.88	0.7310
2	64.17	0.7310
3	64.28	0.7310
4	62.94	0.7896
Sex		
F	63.71	0.5380
M	65.42	0.5169
Strain		
C	65.55	0.6331
H	65.16	0.6331
R	62.99	0.6715

Analysis of variance for water in thigh skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	1795.46	1795.46	598.49	13.75	0.000
Feed	3	374.35	374.35	124.78	2.87	0.058
Sex	1	62.17	62.17	62.17	1.43	0.244
Strain	2	177.07	177.07	88.53	2.03	0.153
Age*Feed	9	376.15	376.15	41.79	0.96	0.495
Age*Sex	3	21.22	21.22	7.07	0.16	0.921
Age*Strain	6	197.99	197.99	33.00	0.76	0.610
Feed*Sex	3	138.13	138.13	46.04	1.06	0.385
Feed*Strain	6	277.21	277.21	46.20	1.06	0.412
Sex*Strain	2	199.09	199.09	99.54	2.29	0.123
Age*Feed*Sex	9	477.81	477.81	53.09	1.22	0.329
Age*Feed*Strain	18	866.22	866.22	48.12	1.11	0.403
Feed*Sex*Strain	6	227.36	227.36	37.89	0.87	0.531
Error	24	1044.84	1044.84	43.54		
Total	95	6235.07				

S = 6.59812   R-Sq = 83.24%   R-Sq(adj) = 33.67%

Least squares means for water in thigh skin

Age	Mean	SE Mean
14	40.36	1.3468

28	35.50	1.3468
42	31.87	1.3468
56	28.74	1.3468
Feed		
1	35.28	1.3468
2	36.76	1.3468
3	32.07	1.3468
4	32.36	1.3468
Sex		
F	33.31	0.9524
M	34.92	0.9524
Strain		
C	32.22	1.1664
H	34.79	1.1664
R	35.34	1.1664

Analysis of variance for water in drum meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	241.221	201.476	67.159	9.33	0.000
Feed	3	115.186	139.096	46.365	6.44	0.003
Sex	1	0.550	0.055	0.055	0.01	0.931
Strain	2	29.333	26.545	13.272	1.84	0.181
Age*Feed	9	71.904	90.881	10.098	1.40	0.244
Age*Sex	3	22.810	30.265	10.088	1.40	0.268
Age*Strain	6	48.755	39.751	6.625	0.92	0.499
Feed*Sex	3	43.956	53.974	17.991	2.50	0.085
Feed*Strain	6	31.626	36.083	6.014	0.84	0.555
Sex*Strain	2	6.379	3.736	1.868	0.26	0.774
Age*Feed*Sex	9	107.165	104.189	11.577	1.61	0.172
Age*Feed*Strain	18	118.044	117.881	6.549	0.91	0.576
Feed*Sex*Strain	6	66.596	66.596	11.099	1.54	0.209
Error	23	165.628	165.628	7.201		
Total	94	1069.152				

S = 2.68351   R-Sq = 84.51%   R-Sq(adj) = 36.69%

Least squares means for water in drum meat

Age	Mean	SE Mean
14	74.74	0.5478
28	72.35	0.5478
42	71.35	0.5478
56	70.94	0.5917
Feed		
1	74.31	0.5917
2	71.83	0.5478
3	72.39	0.5478
4	70.84	0.5478
Sex		
F	72.37	0.4031
M	72.32	0.3873
Strain		
C	72.30	0.5032
H	73.01	0.4744
R	71.72	0.4744

Analysis of variance for water in drum skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	2895.86	2895.86	965.29	44.61	0.000
Feed	3	469.38	469.38	156.46	7.23	0.001
Sex	1	374.74	374.74	374.74	17.32	0.000
Strain	2	212.39	212.39	106.20	4.91	0.016
Age*Feed	9	93.53	93.53	10.39	0.48	0.874
Age*Sex	3	183.37	183.37	61.12	2.82	0.060
Age*Strain	6	117.08	117.08	19.51	0.90	0.510
Feed*Sex	3	35.67	35.67	11.89	0.55	0.653
Feed*Strain	6	57.63	57.63	9.61	0.44	0.842
Sex*Strain	2	91.33	91.33	45.67	2.11	0.143
Age*Feed*Sex	9	205.91	205.91	22.88	1.06	0.427
Age*Feed*Strain	18	213.80	213.80	11.88	0.55	0.902
Feed*Sex*Strain	6	35.25	35.25	5.88	0.27	0.945
Error	24	519.37	519.37	21.64		
Total	95	5505.31				

S = 4.65193   R-Sq = 90.57%   R-Sq(adj) = 62.66%

Least squares means for water in drum skin

Age	Mean	SE Mean
14	50.54	0.9496
28	44.56	0.9496
42	38.57	0.9496
56	36.47	0.9496
Feed		
1	44.95	0.9496
2	44.09	0.9496
3	41.86	0.9496
4	39.24	0.9496
Sex		
F	40.56	0.6714
M	44.51	0.6714
Strain		
C	40.65	0.8224
H	44.28	0.8224
R	42.67	0.8224

Analysis of variance for water in wing meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	236.22	232.98	77.66	3.94	0.021
Feed	3	131.74	130.32	43.44	2.20	0.115
Sex	1	39.92	39.42	39.42	2.00	0.171
Strain	2	87.26	82.25	41.13	2.08	0.147
Age*Feed	9	310.35	305.91	33.99	1.72	0.141
Age*Sex	3	19.95	21.15	7.05	0.36	0.784
Age*Strain	6	195.02	152.13	25.36	1.28	0.303
Feed*Sex	3	67.57	66.48	22.16	1.12	0.360
Feed*Strain	6	120.27	126.50	21.08	1.07	0.410
Sex*Strain	2	73.52	59.65	29.82	1.51	0.242
Age*Feed*Sex	9	303.80	278.08	30.90	1.57	0.185
Age*Feed*Strain	18	351.16	360.07	20.00	1.01	0.481

Feed*Sex*Strain	6	91.57	91.57	15.26	0.77	0.599
Error	23	453.84	453.84	19.73		
Total	94	2482.19				

S = 4.44211   R-Sq = 81.72%   R-Sq(adj) = 25.27%

Least squares means for water in wing meat

Age	Mean	SE Mean
14	72.52	0.9067
28	69.98	0.9067
42	68.81	0.9067
56	68.50	0.9794
Feed		
1	71.59	0.9067
2	70.36	0.9794
3	68.43	0.9067
4	69.43	0.9067
Sex		
F	69.30	0.6673
M	70.60	0.6412
Strain		
C	70.86	0.8329
H	70.34	0.7853
R	68.65	0.7853

Analysis of variance for water in wing skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	2848.66	2721.29	907.10	25.78	0.000
Feed	3	272.14	271.65	90.55	2.57	0.079
Sex	1	372.69	356.51	356.51	10.13	0.004
Strain	2	30.28	29.89	14.94	0.42	0.659
Age*Feed	9	130.62	111.09	12.34	0.35	0.947
Age*Sex	3	74.19	72.62	24.21	0.69	0.569
Age*Strain	6	154.14	155.35	25.89	0.74	0.626
Feed*Sex	3	59.12	56.23	18.74	0.53	0.664
Feed*Strain	6	170.86	171.01	28.50	0.81	0.573
Sex*Strain	2	1.12	1.07	0.53	0.02	0.985
Age*Feed*Sex	9	224.54	224.28	24.92	0.71	0.696
Age*Feed*Strain	18	322.61	319.22	17.73	0.50	0.929
Feed*Sex*Strain	6	103.51	103.51	17.25	0.49	0.809
Error	23	809.37	809.37	35.19		
Total	94	5573.84				

S = 5.93211   R-Sq = 85.48%   R-Sq(adj) = 40.65%

Least squares means for water in wing skin

Age	Mean	SE Mean
14	57.45	1.2109
28	54.27	1.2109
42	46.52	1.2109
56	44.07	1.3079
Feed		
1	52.21	1.2109

2	51.38	1.3079
3	50.97	1.2109
4	47.76	1.2109
Sex		
F	48.61	0.8562
M	52.55	0.8912
Strain		
C	49.88	1.1123
H	51.28	1.0487
R	50.58	1.0487

Analysis of variance for protein in breast meat (as is basis)

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	52.9535	52.9535	17.6512	28.09	0.000
Feed	3	10.0469	10.0469	3.3490	5.33	0.006
Sex	1	0.0232	0.0232	0.0232	0.04	0.849
Strain	2	0.5743	0.5743	0.2871	0.46	0.639
Age*Feed	9	7.6215	7.6215	0.8468	1.35	0.266
Age*Sex	3	8.1903	8.1903	2.7301	4.34	0.014
Age*Strain	6	2.0546	2.0546	0.3424	0.54	0.769
Feed*Sex	3	3.6522	3.6522	1.2174	1.94	0.151
Feed*Strain	6	4.1391	4.1391	0.6899	1.10	0.392
Sex*Strain	2	0.8960	0.8960	0.4480	0.71	0.500
Age*Feed*Sex	9	5.8020	5.8020	0.6447	1.03	0.448
Age*Feed*Strain	18	11.6211	11.6211	0.6456	1.03	0.468
Feed*Sex*Strain	6	0.7314	0.7314	0.1219	0.19	0.975
Error	24	15.0831	15.0831	0.6285		
Total	95	123.3893				

S = 0.792755   R-Sq = 87.78%   R-Sq(adj) = 51.61%

Least squares means for protein in breast meat

Age	Mean	SE Mean
14	22.63	0.1618
28	23.95	0.1618
42	24.11	0.1618
56	24.65	0.1618
Feed		
1	23.64	0.1618
2	24.39	0.1618
3	23.74	0.1618
4	23.58	0.1618
Sex		
F	23.85	0.1144
M	23.82	0.1144
Strain		
C	23.94	0.1401
H	23.76	0.1401
R	23.80	0.1401

Analysis of variance for protein in breast skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	37.145	36.055	12.018	1.75	0.184
Feed	3	111.089	105.518	35.173	5.13	0.007
Sex	1	42.227	43.980	43.980	6.41	0.019
Strain	2	20.854	21.119	10.560	1.54	0.236
Age*Feed	9	75.558	73.747	8.194	1.19	0.344
Age*Sex	3	28.634	29.310	9.770	1.42	0.261
Age*Strain	6	20.239	20.573	3.429	0.50	0.802
Feed*Sex	3	23.077	22.838	7.613	1.11	0.365
Feed*Strain	6	30.712	22.736	3.789	0.55	0.763
Sex*Strain	2	41.774	39.981	19.990	2.92	0.074
Age*Feed*Sex	9	69.925	65.144	7.238	1.06	0.429
Age*Feed*Strain	18	143.246	144.157	8.009	1.17	0.358
Feed*Sex*Strain	6	48.340	48.340	8.057	1.17	0.354
Error	23	157.713	157.713	6.857		
Total	94	850.532				

S = 2.61860   R-Sq = 81.46%   R-Sq(adj) = 24.22%

Least squares means for protein in breast skin

Age	Mean	SE Mean
14	10.56	0.5345
28	12.24	0.5345
42	11.15	0.5345
56	11.05	0.5773
Feed		
1	12.87	0.5345
2	11.47	0.5345
3	10.55	0.5773
4	10.11	0.5345
Sex		
F	10.56	0.3780
M	11.94	0.3934
Strain		
C	10.64	0.4629
H	11.78	0.4629
R	11.34	0.4910

Analysis of variance for protein in thigh meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	36.530	36.745	12.248	3.32	0.039
Feed	3	29.381	27.177	9.059	2.45	0.090
Sex	1	1.883	2.015	2.015	0.55	0.468
Strain	2	14.922	14.274	7.137	1.93	0.168
Age*Feed	9	30.730	30.405	3.378	0.92	0.530
Age*Sex	3	32.986	27.401	9.134	2.48	0.088
Age*Strain	6	37.422	28.108	4.685	1.27	0.311
Feed*Sex	3	11.414	9.214	3.071	0.83	0.490
Feed*Strain	6	29.293	31.076	5.179	1.40	0.258
Sex*Strain	2	14.558	11.824	5.912	1.60	0.224
Age*Feed*Sex	9	67.377	70.974	7.886	2.14	0.071
Age*Feed*Strain	18	120.399	120.622	6.701	1.82	0.092
Feed*Sex*Strain	6	34.474	34.474	5.746	1.56	0.207
Error	22	81.188	81.188	3.690		
Total	93	542.555				

S = 1.92103   R-Sq = 85.04%   R-Sq(adj) = 36.74%

Least squares means for protein in thigh meat

Age	Mean	SE Mean
14	17.68	0.3921
28	17.83	0.3921
42	18.78	0.4235
56	19.22	0.4235
Feed		
1	18.57	0.4235
2	19.12	0.3921
3	17.67	0.3921
4	18.14	0.4235

Sex		
F	18.53	0.2995
M	18.22	0.2773

Strain		
C	18.54	0.3396
H	17.82	0.3396
R	18.76	0.3797

Analysis of variance for protein in thigh skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	102.926	104.447	34.816	14.49	0.000
Feed	3	42.826	29.749	9.916	4.13	0.019
Sex	1	49.601	53.483	53.483	22.26	0.000
Strain	2	2.607	0.750	0.375	0.16	0.857
Age*Feed	9	15.407	13.933	1.548	0.64	0.748
Age*Sex	3	39.767	38.371	12.790	5.32	0.007
Age*Strain	6	12.015	14.476	2.413	1.00	0.449
Feed*Sex	3	12.376	14.513	4.838	2.01	0.143
Feed*Strain	6	14.990	17.472	2.912	1.21	0.339
Sex*Strain	2	12.438	7.445	3.723	1.55	0.236
Age*Feed*Sex	9	11.732	13.434	1.493	0.62	0.766
Age*Feed*Strain	18	45.701	46.799	2.600	1.08	0.427
Feed*Sex*Strain	6	17.724	17.724	2.954	1.23	0.331
Error	21	50.465	50.465	2.403		
Total	92	430.575				

S = 1.55019   R-Sq = 88.28%   R-Sq(adj) = 48.65%

Least squares means for protein in thigh skin

Age	Mean	SE Mean
14	10.204	0.3164
28	9.562	0.3425
42	8.116	0.3660
56	7.544	0.3164

Feed		
1	9.533	0.3588
2	9.299	0.3164
3	8.497	0.3418
4	8.095	0.3164

Sex		
F	8.069	0.2392
M	9.644	0.2329

Strain		
C	8.777	0.2911
H	8.989	0.2911
R	8.803	0.2907

Analysis of variance for protein in drum meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	42.040	36.881	12.294	6.08	0.004
Feed	3	5.874	5.748	1.916	0.95	0.434
Sex	1	8.583	6.729	6.729	3.33	0.082

Strain	2	14.236	16.101	8.050	3.98	0.033
Age*Feed	9	7.046	6.901	0.767	0.38	0.933
Age*Sex	3	7.161	6.014	2.005	0.99	0.415
Age*Strain	6	9.265	10.838	1.806	0.89	0.516
Feed*Sex	3	2.816	2.832	0.944	0.47	0.708
Feed*Strain	6	7.562	9.041	1.507	0.75	0.619
Sex*Strain	2	6.829	7.755	3.877	1.92	0.171
Age*Feed*Sex	9	13.677	12.732	1.415	0.70	0.702
Age*Feed*Strain	18	29.498	29.803	1.656	0.82	0.663
Feed*Sex*Strain	6	1.907	1.907	0.318	0.16	0.985
Error	22	44.457	44.457	2.021		
Total	93	200.950				

S = 1.42153   R-Sq = 77.88%   R-Sq(adj) = 6.48%

Least squares means for protein in drum meat

Age	Mean	SE Mean
14	18.63	0.2902
28	18.83	0.2902
42	20.01	0.2902
56	20.08	0.3746
Feed		
1	19.44	0.3746
2	19.77	0.2902
3	19.20	0.2902
4	19.15	0.2902
Sex		
F	19.67	0.2369
M	19.10	0.2052
Strain		
C	19.50	0.2714
H	18.82	0.2714
R	19.84	0.2513

Analysis of variance for protein in drum skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	133.552	133.552	44.517	6.39	0.002
Feed	3	117.036	117.036	39.012	5.60	0.005
Sex	1	20.809	20.809	20.809	2.99	0.097
Strain	2	58.076	58.076	29.038	4.17	0.028
Age*Feed	9	213.876	213.876	23.764	3.41	0.008
Age*Sex	3	33.722	33.722	11.241	1.61	0.212
Age*Strain	6	108.536	108.536	18.089	2.60	0.044
Feed*Sex	3	54.991	54.991	18.330	2.63	0.073
Feed*Strain	6	126.368	126.368	21.061	3.02	0.024
Sex*Strain	2	3.440	3.440	1.720	0.25	0.783
Age*Feed*Sex	9	77.877	77.877	8.653	1.24	0.317
Age*Feed*Strain	18	128.264	128.264	7.126	1.02	0.471
Feed*Sex*Strain	6	47.505	47.505	7.917	1.14	0.372
Error	24	167.157	167.157	6.965		
Total	95	1291.208				

S = 2.63911   R-Sq = 87.05%   R-Sq(adj) = 48.76%

Least squares means for protein in drum skin

Age	Mean	SE Mean
14	13.63	0.5387
28	13.26	0.5387
42	11.77	0.5387
56	10.69	0.5387
Feed		
1	13.80	0.5387
2	12.40	0.5387
3	12.47	0.5387
4	10.69	0.5387
Sex		
F	11.87	0.3809
M	12.80	0.3809
Strain		
C	11.86	0.4665
H	13.43	0.4665
R	11.71	0.4665

Analysis of variance for protein in wing meat

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	89.014	81.500	27.167	4.09	0.021
Feed	3	18.485	8.380	2.793	0.42	0.741
Sex	1	8.835	8.653	8.653	1.30	0.268
Strain	2	21.907	14.046	7.023	1.06	0.367
Age*Feed	9	111.860	119.098	13.233	1.99	0.099
Age*Sex	3	19.904	12.653	4.218	0.63	0.602
Age*Strain	6	49.861	54.255	9.042	1.36	0.280
Feed*Sex	3	24.273	21.164	7.055	1.06	0.389
Feed*Strain	6	58.710	32.458	5.410	0.81	0.572
Sex*Strain	2	38.447	50.310	25.155	3.78	0.041
Age*Feed*Sex	9	126.863	95.973	10.664	1.60	0.184
Age*Feed*Strain	18	147.427	163.699	9.094	1.37	0.252
Feed*Sex*Strain	6	71.528	71.528	11.921	1.79	0.154
Error	19	126.324	126.324	6.649		
Total	90	913.438				

S = 2.57849   R-Sq = 86.17%   R-Sq(adj) = 34.49%

Least squares means for protein in wing meat

Age	Mean	SE Mean
14	19.47	0.5263
28	20.00	0.6088
42	19.97	0.5697
56	22.14	0.6078
Feed		
1	20.78	0.5685
2	20.25	0.5685
3	20.60	0.6228
4	19.95	0.5685
Sex		
F	20.72	0.4165
M	20.07	0.4024

Strain		
C	20.21	0.5345
H	20.02	0.4842
R	20.96	0.4842

Analysis of variance for protein in wing skin

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Age	3	106.95	74.86	24.95	1.93	0.154
Feed	3	122.43	129.05	43.02	3.33	0.038
Sex	1	5.51	1.36	1.36	0.11	0.749
Strain	2	59.06	59.87	29.93	2.32	0.122
Age*Feed	9	123.82	134.78	14.98	1.16	0.366
Age*Sex	3	5.08	7.19	2.40	0.19	0.905
Age*Strain	6	109.11	98.68	16.45	1.27	0.309
Feed*Sex	3	30.90	33.80	11.27	0.87	0.470
Feed*Strain	6	57.43	47.84	7.97	0.62	0.714
Sex*Strain	2	53.90	56.62	28.31	2.19	0.135
Age*Feed*Sex	9	68.91	68.47	7.61	0.59	0.792
Age*Feed*Strain	18	222.89	219.34	12.19	0.94	0.544
Feed*Sex*Strain	6	53.18	53.18	8.86	0.69	0.662
Error	22	283.83	283.83	12.90		
Total	93	1303.00				

S = 3.59183   R-Sq = 78.22%   R-Sq(adj) = 7.92%

Least squares means for protein in wing skin

Age	Mean	SE Mean
14	14.25	0.7332
28	13.54	0.7919
42	12.95	0.7332
56	11.73	0.7919
Feed		
1	13.36	0.7332
2	13.46	0.7919
3	14.51	0.7332
4	11.16	0.7919
Sex		
F	13.24	0.5396
M	13.00	0.5396
Strain		
C	13.07	0.6735
H	14.14	0.6350
R	12.15	0.6735

																				Prote
Age	**Pen No**	**Strain**	**Feed**	**Sex**	**B Weight**	**Breast**	**Brst Skin**	**Thighs**	**Th Meat**	**Th Skin**	**Drums**	**Dr Meat**	**Dr Skin**	**Wings**	**Wg Meat**	**Wg Skin**	br meat	br skin	th meat	th skin
2	7	C	3	M	616	81.6	9.9	54.0	43.3	8.3	43.0	31.2	7.9	25.2	12.7	8.9	24.21	7.88	13.91	8.65
2	7	C	3	M	620	69.2	9.7	54.8	42.6	8.6	42.8	26.5	9.1	31.1	13.4	9.9	24.21	7.88	13.91	8.65
2	8	R	2	F	397	50.8	4.4	31.7	22.3	6.5	28.5	18.3	2.2	21.9	10.0	5.6	24.28	11.18	17.20	11.69
2	8	R	2	F	421	51.9	4.5	33.6	24.6	5.9	25.8	16.6	3.9	25.0	11.2	5.5	24.28	11.18	17.20	11.69
2	9	H	2	F	477	68.6	5.7	43.7	25.7	5.6	36.8	24.6	3.3	29.2	13.0	6.8	22.91	12.39	16.86	10.82
2	9	H	2	F	475	63.3	5.3	47.3	36.2	9.2	32.9	21.9	3.6	28.6	16.0	6.7	22.91	12.39	16.86	10.82
2	10	C	1	M	541	73.0	6.1	48.5	37.9	4.5	45.5	31.3	9.3	33.4	15.9	8.1	22.29	9.31	19.11	9.89
2	10	C	1	M	517	58.9	5.9	45.8	34.0	6.5	38.0	23.3	3.2	30.2	12.4	6.3	22.29	9.31	19.11	9.89
2	11	R	3	F	363	43.5	5.2	30.1	24.8	5.4	24.8	17.1	1.5	20.1	9.5	5.2	22.81	8.02	15.80	9.52
2	11	R	3	F	308	30.4	4.0	24.8	19.7	2.8	23.5	14.6	5.5	17.2	6.8	4.3	22.81	8.02	15.80	9.52
2	12	H	4	M	358	38.5	7.0	27.4	21.7	4.8	29.5	20.5	3.1	21.2	9.1	4.4	22.52	13.46	19.77	9.94
2	12	H	4	M	398	47.8	5.0	32.8	25.0	5.6	31.1	19.8	2.1	23.5	12.1	5.3	22.52	13.46	19.77	9.94
2	13	C	4	M	419	42.2	6.9	34.4	27.1	3.0	29.6	16.6	2.3	24.0	9.4	4.2	23.22	10.11	19.81	9.25
2	13	C	4	M	475	50.8	5.6	46.9	35.9	4.2	34.0	22.8	7.8	33.4	16.4	5.8	23.22	10.11	19.81	9.25
2	14	H	1	M	523	65.4	5.7	45.9	36.1	5.4	42.2	28.1	5.6	31.0	13.1	6.3	23.97	10.55	16.70	10.24
2	14	H	1	M	481	56.8	8.8	37.3	31.7	5.7	41.8	26.4	4.9	25.4	9.5	5.8	23.97	10.55	16.70	10.24
2	15	C	1	F	481	69.1	6.1	43.7	33.9	3.3	36.5	25.6	5.1	26.5	14.5	5.9	21.05	12.86	23.95	9.57
2	15	C	1	F	502	65.2	6.8	45.0	36.9	6.4	38.3	26.2	4.3	29.7	13.1	7.5	21.05	12.86	23.95	9.57
2	16	C	4	F	373	43.3	7.0	20.9	13.6	1.5	30.4	22.6	6.2	20.5	9.1	5.0	21.82	7.00	17.83	11.28
2	16	C	4	F	378	45.0	4.9	36.8	28.2	4.8	25.4	16.7	4.8	20.6	8.9	4.9	21.82	7.00	17.83	11.28
2	17	R	2	M	400	40.6	4.4	31.9	24.7	6.0	28.4	18.6	2.6	20.9	8.7	5.9	23.65	12.08	18.28	8.90
2	17	R	2	M	380	47.7	4.9	30.5	24.6	3.9	29.6	19.6	3.7	22.7	10.1	2.9	23.65	12.08	18.28	8.90
2	18	H	3	M	502	63.6	6.6	42.1	33.3	6.7	39.5	29.3	3.9	26.2	13.6	7.2	23.36	10.36	19.75	8.02
2	18	H	3	M	438	52.2	5.7	37.7	29.1	3.5	34.0	20.5	5.5	27.3	11.0	6.4	23.36	10.36	19.75	8.02
2	31	R	4	F	321	28.4	3.6	26.0	19.7	8.1	22.4	13.7	2.7	20.9	10.9	3.8	21.50	7.69	16.95	9.30
2	31	R	4	F	300	26.9	4.4	23.9	18.4	3.3	20.8	12.6	4.4	15.9	7.5	6.4	21.50	7.69	16.95	9.30
2	32	H	2	M	479	62.8	6.5	43.5	35.6	4.2	39.8	28.3	4.8	26.2	11.6	5.4	23.14	10.24	15.29	11.70
2	32	H	2	M	475	62.6	6.8	39.9	28.8	4.8	39.2	25.7	2.8	29.6	13.1	5.7	23.14	10.24	15.29	11.70
2	33	H	1	F	486	54.5	6.6	40.7	33.1	7.5	38.4	27.0	2.7	28.4	14.7	7.9	22.26	11.47	17.17	11.10
2	33	H	1	F	400	45.6	3.7	32.9	26.1	3.8	31.9	21.8	3.5	27.6	14.8	4.8	22.26	11.47	17.17	11.10
2	34	H	3	F	393	49.0	5.9	32.1	27.1	6.1	32.2	22.1	1.7	25.3	13.6	6.3	21.45	10.85	14.21	9.97
2	34	H	3	F	409	45.8	4.0	35.3	26.4	4.7	25.4	17.4	2.8	22.7	10.1	5.2	21.45	10.85	14.21	9.97
2	35	H	4	F	427	46.6	7.8	33.2	27.9	6.2	30.0	21.6	4.8	22.5	11.2	5.6	22.48	5.93	15.60	8.81
2	35	H	4	F	388	40.8	7.1	32.5	26.0	4.5	30.1	20.6	4.1	23.1	9.8	5.0	22.48	5.93	15.60	8.81
2	36	R	4	M	403	42.1	5.1	33.8	25.4	5.2	28.6	18.6	4.8	23.2	11.3	5.0	22.06	14.35	16.75	9.26
2	36	R	4	M	331	31.3	3.3	25.6	20.8	3.0	26.4	17.9	2.9	19.7	9.2	4.8	22.06	14.35	16.75	9.26
2	37	R	1	F	394	51.3	5.3	32.9	26.8	4.2	32.0	22.6	4.0	22.6	9.2	5.2	21.18	16.88	20.30	12.09
2	37	R	1	F	426	59.1	5.2	34.5	26.5	5.6	36.0	23.7	2.2	28.1	12.5	6.3	21.18	16.88	20.30	12.09
2	38	C	3	F	415	51.3	5.6	32.2	25.6	6.9	30.6	20.9	4.8	24.5	12.1	8.1	21.89	8.18	14.13	8.83
2	38	C	3	F	417	51.1	8.2	33.4	27.3	5.0	31.9	22.0	4.5	25.3	12.0	6.0	21.89	8.18	14.13	8.83
2	39	R	3	M	391	40.4	5.8	31.8	26.4	6.2	33.1	22.1	2.1	23.4	11.6	4.5	23.39	8.32	18.55	10.99
2	39	R	3	M	376	39.0	4.7	34.6	25.7	3.5	27.6	18.2	4.3	22.2	11.5	4.0	23.39	8.32	18.55	10.99
2	40	C	2	F	513	76.6	7.7	46.1	39.2	5.3	39.0	27.9	5.3	30.4	14.9	7.8	22.48	8.54	18.20	10.35
2	40	C	2	F	339	42.2	5.2	26.5	21.1	2.9	24.8	16.0	2.8	19.9	8.2	4.9	22.48	8.54	18.20	10.35
2	41	R	1	M	412	42.7	3.1	37.3	28.2	5.3	32.8	21.9	3.5	24.8	11.5	5.6	21.75	12.87	16.44	13.65
2	41	R	1	M	405	52.3	4.8	27.6	21.7	5.4	31.3	22.2	1.7	25.5	13.0	5.6	21.75	12.87	16.44	13.65
2	42	C	2	M	600	80.2	8.2	53.6	44.9	6.0	50.4	35.8	7.0	34.6	17.7	8.0	23.40	12.93	21.70	11.08
2	42	C	2	M	571	85.7	7.4	47.3	39.4	4.3	42.6	31.0	6.6	31.6	17.7	8.6	23.40	12.93	21.70	11.08
4	7	C	3	M	1574	261	24.3	147	123	19.9	138.0	97.1	22.5	87.8	46.8	24.9	23.81	13.51	17.21	7.92
4	7	C	3	M	1641	261	15.7	149	121	38.0	126.0	81.2	12.8	43.2	24.1	14.2	23.81	13.51	17.21	7.92
4	8	R	2	F	977	138	11.7	94.0	74.8	10.7	71.1	47.3	12.5	59.8	31.7	19.7	25.08	12.15	18.04	7.62
4	8	R	2	F	1226	182	18.7	117	91.6	20.6	103.0	71.1	9.3	70.2	42.7	25.4	25.08	12.15	18.04	7.62
4	9	H	2	F	1092	161	13.9	86.8	67.0	8.1	86.6	61.0	13.2	63.0	31.7	15.9	23.82	8.77	15.91	7.98
4	9	H	2	F	923	135	9.1	79	63.6	10.1	66.4	49.1	12.0	59.4	33.0	16.3	23.82	8.77	15.91	7.98

4	10	C	1	M	1880	351	26.6	191	173	25.6	155.0	111.0	23.8	93.3	56.0	29.3	23.31	11.05	18.53	9.87
4	10	C	1	M	1711	259	20.3	166	143	25.5	138.0	107.0	15.8	99.4	57.3	30.0	23.31	11.05	18.53	9.87
4	11	R	3	F	1100	139	14.8	105	83.5	24.8	81.8	54.6	10.2	73.7	43.3	23.6	23.70	11.13	18.97	8.53
4	11	R	3	F	1200	172	17.8	100	79.0	24.0	93.5	67.6	11.9	77.4	45.3	20.8	23.70	11.13	18.97	8.53
4	12	H	4	M	1335	223	24.2	120	101	16.2	108.0	77.9	16.2	79.2	41.9	19.5	23.74	9.57	16.99	8.48
4	12	H	4	M	1376	216	16.2	124	103	9.5	117.0	84.2	23.3	78.6	43.9	21.8	23.74	9.57	16.99	8.48
4	13	C	4	M	1696	254	26.5	146	120	32.4	123.0	79.9	14.5	89.4	51.4	29.4	23.24	9.21	17.09	9.31
4	13	C	4	M	1648	253	18.6	153	130	15.4	123.0	92.2	23.3	90.3	47.8	24.8	23.24	9.21	17.09	9.31
4	14	H	1	M	1876	342	23.6	179	150	25.6	154.0	114.2	13.7	107.0	63.0	32.7	23.51	15.24	18.79	10.03
4	14	H	1	M	1715	306	18.4	159	136	24.4	140.0	104.0	14.1	92.6	54.7	28.4	23.51	15.24	18.79	10.03
4	15	C	1	F	1171	191	10.5	104	83.9	17.3	86.4	57.6	7.5	73.8	41.1	19.5	25.62	15.62	18.91	0.00
4	15	C	1	F	1127	209	14.3	98	74.8	15.0	83.4	55.9	8.2	54.7	26.1	19.4	25.62	15.62	18.91	0.00
4	16	C	4	F	909	105	9.7	76	62.4	17.8	68.2	50.7	10.0	57.8	32.4	20.6	23.70	11.80	17.90	10.54
4	16	C	4	F	1000	124	16.0	96	78.2	17.2	76.0	52.6	14.2	63.8	36.1	19.6	23.70	11.80	17.90	10.54
4	17	R	2	M	1425	186	20.9	131	110	18.9	117.0	82.9	18.9	84.2	44.3	32.1	23.83	8.26	18.06	12.88
4	17	R	2	M	1483	220	22.2	144	119	20.6	120.0	83.8	16.7	81.3	41.5	24.4	23.83	8.26	18.06	12.88
4	18	H	3	M	1488	203	12.3	124	97.1	20.1	118.0	82.4	7.5	90.2	47.9	21.2	22.78	17.75	17.90	8.32
4	18	H	3	M	1467	232	23.2	145	123	17.3	126.0	86.5	17.2	78.5	41.3	22.4	22.78	17.75	17.90	8.32
4	31	R	4	F	1256	160	12.1	108	91.1	20.5	99.0	73.6	25.0	73.4	42.1	20.9	22.79	12.22	17.65	6.72
4	31	R	4	F	1099	136	13.7	90	75.1	14.9	85.5	59.3	19.0	64.8	36.1	19.6	22.79	12.22	17.65	6.72
4	32	H	2	M	1600	264	17.9	150	125	20.7	138.5	97.6	18.5	97.5	55.6	28.1	23.22	12.86	16.71	10.06
4	32	H	2	M	1550	282	22.0	135	106	22.1	118.0	81.8	13.1	97.7	56.1	30.7	23.22	12.86	16.71	10.06
4	33	H	1	F	1481	244	18.8	127	107	20.6	106.0	77.4	15.4	86.5	43.3	23.9	24.92	12.92	17.33	12.27
4	33	H	1	F	1082	167	13.8	106	86.0	12.5	94.5	64.9	10.4	67.3	33.1	16.2	24.92	12.92	17.33	12.27
4	34	H	3	F	1275	193	20.8	122	102	10.1	102.0	73.5	6.8	79.7	49.8	15.6	23.81	14.74	17.49	11.58
4	34	H	3	F	1258	185	15.3	102	83.4	14.2	98.6	71.6	22.0	73.2	41.7	26.9	23.81	14.74	17.49	11.58
4	35	H	4	F	972	142	9.4	90	74.6	13.5	73.0	54.6	8.0	61.7	36.4	13.9	22.89	10.26	16.62	8.19
4	35	H	4	F	1174	167	12.9	110	90.2	18.0	93.9	65.7	12.6	63.7	29.8	20.5	22.89	10.26	16.62	8.19
4	36	R	4	M	1423	182	21.7	130	106	21.0	124	86.6	21.9	75.0	37.9	24.5	24.93	11.22	19.09	8.20
4	36	R	4	M	1387	172	13.5	116	95.0	22.8	114	82.8	14.8	82.7	50.7	26.2	24.93	11.22	19.09	8.20
4	37	R	1	F	1302	206	7.7	102	82.9	14.5	107	77.8	18.2	78.9	41.0	22.9	24.92	13.64	15.84	10.91
4	37	R	1	F	1193	157	13.3	114	95.6	15.7	103	76.5	15.2	71.0	41.3	23.8	24.92	13.64	15.84	10.91
4	38	C	3	F	1172	171	19.2	96	82.2	18.6	90	65.4	16.3	63.4	34.3	18.9	24.82	11.92	16.28	6.54
4	38	C	3	F	1364	242	25.1	125	104	19.7	110	79.1	13.1	73.1	36.1	24.0	24.82	11.92	16.28	6.54
4	39	R	3	M	1400	188	14.5	129	107	18.7	124	80.9	14.9	92.3	51.0	21.5	24.33	11.27	18.20	9.22
4	39	R	3	M	1440	216	15.8	142	112	14.7	121	81.6	14.3	76.7	37.2	22.2	24.33	11.27	18.20	9.22
4	40	C	2	F	1169	189	18.1	94	78.8	15.3	85	60.9	13.8	73.5	38.5	19.9	24.63	9.29	18.97	10.53
4	40	C	2	F	1427	229	12.1	120	99.9	13.6	113	83.0	26.8	73.1	37.2	20.2	24.63	9.29	18.97	10.53
4	41	R	1	M	1523	175	21.0	140	114	24.2	124	85.1	11.4	83.1	40.7	28.6	22.98	15.76	15.67	13.73
4	41	R	1	M	1480	198	16.4	135	106	23.0	117	82.6	11.4	77.9	35.7	23.5	22.98	15.76	15.67	13.73
4	42	C	2	M	1887	352	20.0	172	163	24.0	155	115	18.5	110	61.6	22.4	24.47	13.63	23.69	10.98
4	42	C	2	M	1904	331	25.7	138	103	24.2	193	154	19.2	110	63.3	23.0	24.47	13.63	23.69	10.98
6	7	C	3	M	2914	605	41.6	272	225	61.5	210	146	28.5	155	88.5	49.2	22.96	11.32	19.14	10.20
6	7	C	3	M	26.4	558	41.7	258	218	35.6	225	154	29.1	151	83.1	38.2	22.96	11.32	19.14	10.20
6	8	R	2	F	2619	456	31.4	242	204	31.8	223	161	30.5	146	90.0	43.0	24.36	11.55	35.01	2.98
6	8	R	2	F	2317	398	38.7	211	180	50.2	203	141	19.9	132	70.9	36.4	24.36	11.55	35.01	2.98
6	9	H	2	F	2408	447	34.5	223	194	31.0	173	134	25.5	163	113	50.5	24.69	8.58	18.38	7.59
6	9	H	2	F	2345	479	34.9	230	198	31.7	183	136	27.0	144	79.0	35.3	24.69	8.58	18.38	7.59
6	10	C	1	M	3061	569	47.1	284	229	39.4	263	180	26.2	178	107	47.1	24.06	10.00	17.40	11.98
6	10	C	1	M	3327	621	54.3	335	292	45.1	293	222	34.9	186	109	48.1	24.06	10.00	17.40	11.98
6	11	R	3	F	268	456	45.0	249	214	44.5	207	156	27.5	167	99.9	37.2	23.05	6.39	18.14	6.42
6	11	R	3	F	2558	432	37.5	222	188	50.3	204	146	25.5	144	99.1	46.5	23.05	6.39	18.14	6.42
6	12	H	4	M	2864	450	43.5	291	254	44.8	223	171	27.0	176	107	49.4	23.58	15.21	17.68	9.17
6	12	H	4	M	3002	504	44.7	271	232	33.9	250	172	32.0	173	109	50.6	23.58	15.21	17.68	9.17
6	13	C	4	M	2592	439	39.9	245	207	36.3	222	161	34.7	151	80.6	42.8	24.66	8.65	17.65	8.79
6	13	C	4	M	2472	433	48.2	249	207	49.0	196	137	17.3	138	70.9	37.7	24.66	8.65	17.65	8.79

6	14	H	1	M	2968	570	31.1	286	237	42.9	276	191	18.1	180	106	53.3	23.00	16.01	18.49	8.75
6	14	H	1	M	3475	759	37.7	330	275	50.8	288	206	19.9	200	118	54.3	23.00	16.01	18.49	8.75
6	15	C	1	F	2802	601	34.1	309	278	39.6	226	178	32.0	160	108	42.7	24.87	10.51	19.01	5.90
6	15	C	1	F	3024	619	43.5	306	261	53.7	231	180	29.5	178	111	42.5	24.87	10.51	19.01	5.90
6	16	C	4	F	2199	355	27.0	216	185	45.0	178	135	29.2	130	80.3	33.0	25.01	6.68	19.60	6.96
6	16	C	4	F	2483	457	42.4	226	198	60.6	185	141	19.4	133	77.2	44.8	25.01	6.68	19.60	6.96
6	17	R	2	M	2671	442	33.7	244	198	41.3	219	161	22.9	160	90.4	46.0	24.09	10.29	17.48	10.49
6	17	R	2	M	2769	387	33.3	296	248	51.3	251	182	46.5	164	98.8	27.6	24.09	10.29	17.48	10.49
6	18	H	3	M	2754	491	24.2	239	198	41.9	252	187	20.2	187	118	39.8	24.35	10.62	18.22	8.27
6	18	H	3	M	2672	443	41.9	268	215	26.8	231	174	35.6	149	83.9	38.6	24.35	10.62	18.22	8.27
6	31	R	4	F	2112	328	35.3	207	173	34.7	184	136	18.4	128	67.5	32.0	23.86	14.96	19.66	7.52
6	31	R	4	F	2256	271	14.6	213	182	53.6	203	149	20.7	146	87.2	39.7	23.86	14.96	19.66	7.52
6	32	H	2	M	3003	523	40.1	276	228	37.7	250	182	25.7	170	101	42.3	23.14	11.94	17.16	9.80
6	32	H	2	M	2943	557	43.5	294	245	27.4	277	197	31.4	190	104	39.8	23.14	11.94	17.16	9.80
6	33	H	1	F	2211	445	23.7	198	166	26.6	176	132	15.7	132	74.1	28.3	24.19	15.93	17.63	0.00
6	33	H	1	F	2752	554	49.2	247	212	38.2	226	172	23.2	158	92.6	41.9	24.19	15.93	17.63	0.00
6	34	H	3	F	2316	378	24.5	217	180	37.5	189	139	23.2	126	69.4	35.7	25.01	10.33	17.34	9.71
6	34	H	3	F	2262	412	31.5	209	182	36.8	158	121	21.9	101	50.1	35.9	25.01	10.33	17.34	9.71
6	35	H	4	F	3216	370	24.4	216	190	48.6	176	134	26.4	130	74.4	37.7	24.26	11.59	17.67	6.45
6	35	H	4	F	2229	356	30.8	232	193	50.4	187	138	20.9	118	67.7	32.9	24.26	11.59	17.67	6.45
6	36	R	4	M	2607	414	46.4	249	207	45.0	217	156	25.4	155	87.3	47.0	23.23	9.05	17.03	7.71
6	36	R	4	M	2962	490	42.8	283	234	49.7	242	175	35.3	147	80.4	44.3	23.23	9.05	17.03	7.71
6	37	R	1	F	2580	449	43.9	236	193	43.5	213	163	21.8	146	88.5	36.7	24.73	11.70	0.00	6.66
6	37	R	1	F	2613	468	26.0	242	201	40.8	222	167	39.9	157	93.8	38.5	24.73	11.70	0.00	6.66
6	38	C	3	F	2819	545	48.3	251	218	45.5	215	156	21.6	161	92.7	53.6	23.58	10.98	19.03	8.04
6	38	C	3	F	2789	476	41.8	245	210	45.4	220	164	42.7	152	82.5	45.1	23.58	10.98	19.03	8.04
6	39	R	3	M	2881	489	38.5	295	250	50.2	250	179	19.5	171	99.7	44.4	24.46	8.85	17.92	0.00
6	39	R	3	M	3003	475	38.1	283	236	52.3	260	183	24.0	181	110	47.5	24.46	8.85	17.92	0.00
6	40	C	2	F	3081	601	37.1	259	223	42.1	232	178	48.1	174	113	32.9	24.73	9.90	18.60	6.98
6	40	C	2	F	2753	544	51.5	263	226	33.8	227	170	35.1	153	88.5	41.4	24.73	9.90	18.60	6.98
6	41	R	1	M	2845	441	42.1	250	205	27.9	240	171	22.7	159	88.5	46.2	23.88	12.31	17.92	11.98
6	41	R	1	M	2592	445	39.2	230	181	26.7	233	168	14.4	161	84.6	40.4	23.88	12.31	17.92	11.98
6	42	C	2	M	3117	575	49.0	284	241	28.5	283	203	42.8	186	108	43.6	24.92	14.28	16.76	10.77
6	42	C	2	M	3072	596	46.2	269	223	44.4	248	178	19.1	160	92.4	37.7	24.92	14.28	16.76	10.77
8	7	C	3	M	4380	943	58	514	450	56	392	294	42	226	131	67	24.74	10.83	18.37	9.68
8	7	C	3	M	4150	769	50	414	344	64	373	272	62	228	129	64	24.74	10.83	18.37	9.68
8	8	R	2	F	3230	573	49	282	234	57	274	209	30	179	103	52	25.89	9.05	20.53	6.16
8	8	R	2	F	3280	638	58	301	239	52	228	161	37	207	117	61	25.89	9.05	20.53	6.16
8	9	H	2	F	3363	711	50	288	248	43	238	180	34	177	99	67	25.22	9.55	19.71	7.61
8	9	H	2	F	3344	702	58	318	274	58	270	210	38	188	108	52	25.22	9.55	19.71	7.61
8	10	C	2	M	5028	1070	72	596	523	61	476	359	60	271	155	88	25.38	11.44	18.76	9.32
8	10	C	2	M	4130	854	65	417	348	52	373	276	34	261	148	53	25.38	11.44	18.76	9.32
8	11	R	2	F	3601	549	56	307	252	81	290	223	56	239	158	73	25.18	10.33	18.77	5.61
8	11	R	2	F	3106	578	36	305	260	62	237	189	59	195	117	52	25.18	10.33	18.77	5.61
8	12	H	2	M	3325	594	51	317	257	41	293	209	41	199	95	55	24.63	14.64	17.71	7.30
8	12	H	2	M	3429	617	33	342	283	52	265	193	50	215	132	52	24.63	14.64	17.71	7.30
8	13	C	2	M	3391	526	49	301	238	78	286	202	43	189	109	57	25.38	6.89	17.90	7.45
8	13	C	2	M	3003	482	51	337	283	52	237	167	40	176	90	50	25.38	6.89	17.90	7.45
8	14	H	2	M	3616	589	35	340	264	36	302	216	33	227	127	52	23.40	13.62	19.98	11.94
8	14	H	2	M	4147	864	61	512	443	66	341	247	45	269	157	65	23.40	13.62	19.98	11.94
8	15	C	2	F	4351	935	62	422	361	54	443	333	34	267	156	63	23.78	18.48	19.47	6.48
8	15	C	2	F	3589	688	52	522	276	49	305	232	63	226	139	68	23.78	18.48	19.47	6.48
8	16	C	2	F	3162	566	57	316	275	77	243	182	64	176	102	62	24.77	8.29	17.98	6.63
8	16	C	2	F	2974	590	55	284	239	80	227	175	34	168	99	48	24.77	8.29	17.98	6.63
8	17	R	2	M	4218	784	51	455	388	64	351	256	62	264	153	90	26.44	17.17	18.89	12.43
8	17	R	2	M	3638	577	50	359	302	43	329	236	36	202	109	48	26.44	17.17	18.89	12.43

8	18	H	2	M	3855	763	53	462	383	45	304	227	48	230	138	55		24.85	10.42	18.01	8.03
8	18	H	2	M	3350	537	40	325	273	64	293	221	43	209	120	68		24.85	10.42	18.01	8.03
8	31	R	2	F	2638	369	42	250	203	54	242	185	49	177	107	50		24.39	9.58	29.63	2.55
8	31	R	2	F	3010	467	46	291	245	68	272	204	61	211	129	51		24.39	9.58	29.63	2.55
8	32	H	2	M	3817	766	65	397	331	45	363	266	42	233	128	62		26.60	20.93	20.11	11.49
8	32	H	2	M	3945	737	54	394	317	47	387	283	35	244	132	64		26.60	20.93	20.11	11.49
8	33	H	2	F	3782	837	59	342	294	81	300	236	28	235	151	53		24.61	7.55	20.20	6.37
8	33	H	2	F	4177	1076	76	348	292	54	308	233	92	238	153	76		24.61	7.55	20.20	6.37
8	34	H	2	F	3606	697	54	363	320	52	302	226	43	248	153	76		24.02	6.62	18.98	7.67
8	34	H	2	F	3038	581	50	291	259	50	247	189	44	212	133	59		24.02	6.62	18.98	7.67
8	35	H	2	F	3030	553	60	251	218	41	237	177	43	191	113	46		24.06	5.97	20.04	6.64
8	35	H	2	F	3827	714	53	367	325	66	272	205	80	240	155	73		24.06	5.97	20.04	6.64
8	36	R	2	M	3175	449	36	285	221	54	262	169	65	237	149	64		23.15	8.24	19.04	7.85
8	36	R	2	M	4115	690	72	420	334	57	363	257	75	267	147	55		23.15	8.24	19.04	7.85
8	37	R	2	F	3744	702	70	361	312	50	325	268	30	229	139	61		25.14	7.05	18.64	7.61
8	37	R	2	F	3856	777	74	422	369	75	350	271	28	209	127	54		25.14	7.05	18.64	7.61
8	38	C	2	F	3214	650	61	300	253	55	283	213	48	224	143	66		23.03	9.47	19.16	5.72
8	38	C	2	F	3785	986	87	360	323	51	251	194	48	215	127	65		23.03	9.47	19.16	5.72
8	39	R	2	M	4102	670	66	410	346	54	384	286	81	270	163	95		24.05	13.59	18.61	8.19
8	39	R	2	M	3728	644	68	346	282	63	323	223	57	202	110	70		24.05	13.59	18.61	8.19
8	40	C	2	F	3488	763	52	346	294	78	281	218	33	192	100	54		25.58	10.42	18.54	5.92
8	40	C	2	F	3633	803	50	330	297	164	256	194	53	224	143	53		25.58	10.42	18.54	5.92
8	41	R	2	M	4728	863	94	379	327	47	392	310	96	256	151	68		22.53	16.15	21.75	6.03
8	41	R	2	M	3939	851	68	432	366	52	367	264	33	207	128	49		22.53	16.15	21.75	6.03
8	42	C	2	M	4425	954	61	420	365	77	349	262	30	269	166	69		24.73	9.40	18.81	6.38
8	42	C	2	M	4351	870	73	419	358	62	368	278	46	232	132	65		24.73	9.40	18.81	6.38

ein %			
dr meat	dr skin	wg meat	wg skin
20.25	10.23	18.98	12.57
20.25	10.23	18.98	12.57
20.45	14.45	20.07	15.01
20.45	14.45	20.07	15.01
18.02	17.31	21.08	14.95
18.02	17.31	21.08	14.95
18.42	10.39	18.59	13.46
18.42	10.39	18.59	13.46
18.00	10.70	18.60	16.56
18.00	10.70	18.60	16.56
18.34	13.82	20.19	16.12
18.34	13.82	20.19	16.12
17.78	11.33	21.21	12.38
17.78	11.33	21.21	12.38
18.14	17.95	19.79	15.55
18.14	17.95	19.79	15.55
20.76	17.86	19.70	12.94
20.76	17.86	19.70	12.94
18.50	14.41	18.45	13.15
18.50	14.41	18.45	13.15
19.80	11.38	19.21	13.53
19.80	11.38	19.21	13.53
17.99	16.66	19.47	13.25
17.99	16.66	19.47	13.25
17.29	8.72	21.18	11.63
17.29	8.72	21.18	11.63
18.12	13.02	17.80	14.43
18.12	13.02	17.80	14.43
15.76	21.34	18.85	17.38
15.76	21.34	18.85	17.38
17.37	15.73	18.71	15.00
17.37	15.73	18.71	15.00
18.69	9.56	20.04	13.88
18.69	9.56	20.04	13.88
18.75	12.35	18.99	12.08
18.75	12.35	18.99	12.08
21.00	17.33	21.09	15.62
21.00	17.33	21.09	15.62
19.45	11.97	17.15	14.00
19.45	11.97	17.15	14.00
18.98	12.20	17.45	15.01
18.98	12.20	17.45	15.01
19.64	9.04	20.91	13.22
19.64	9.04	20.91	13.22
18.15	13.83	18.73	16.32
18.15	13.83	18.73	16.32
17.44	15.49	21.08	14.06
17.44	15.49	21.08	14.06
17.25	14.87	19.13	12.26
17.25	14.87	19.13	12.26
18.13	13.05	20.17	11.60
18.13	13.05	20.17	11.60
17.71	11.28	17.74	13.38
17.71	11.28	17.74	13.38

Lipid %							
br meat	br skin	th meat	th skin	dr meat	dr skin	wg meat	wg skin
2.28	53.02	21.10	55.82	6.30	47.55	8.40	34.37
2.28	53.02	21.10	55.82	6.30	47.55	8.40	34.37
2.46	38.59	16.87	44.02	5.95	28.79	10.30	23.63
2.46	38.59	16.87	44.02	5.95	28.79	10.30	23.63
2.42	38.53	16.13	47.87	6.77	23.34	6.25	29.28
2.42	38.53	16.13	47.87	6.77	23.34	6.25	29.28
2.68	39.93	11.19	44.34	5.18	34.58	7.63	28.74
2.68	39.93	11.19	44.34	5.18	34.58	7.63	28.74
1.84	51.87	17.86	53.20	6.14	44.95	8.49	27.00
1.84	51.87	17.86	53.20	6.14	44.95	8.49	27.00
3.22	40.84	14.90	48.21	7.01	29.91	7.68	23.56
3.22	40.84	14.90	48.21	7.01	29.91	7.68	23.56
4.00	48.62	15.74	52.11	6.51	39.77	8.81	33.42
4.00	48.62	15.74	52.11	6.51	39.77	8.81	33.42
2.43	43.04	16.01	47.00	7.45	29.74	6.77	21.67
2.43	43.04	16.01	47.00	7.45	29.74	6.77	21.67
4.84	40.01	8.70	52.38	3.81	32.53	7.31	30.14
4.84	40.01	8.70	52.38	3.81	32.53	7.31	30.14
4.61	56.25	12.08	40.59	14.60	47.80	8.36	30.54
4.61	56.25	12.08	40.59	14.60	47.80	8.36	30.54
2.20	41.83	14.21	46.99	4.42	34.81	7.30	25.30
2.20	41.83	14.21	46.99	4.42	34.81	7.30	25.30
1.66	44.92	15.37	54.90	6.68	37.90	7.72	28.90
1.66	44.92	15.37	54.90	6.68	37.90	7.72	28.90
4.38	55.39	19.65	58.83	8.29	47.64	7.40	38.68
4.38	55.39	19.65	58.83	8.29	47.64	7.40	38.68
1.77	41.93	17.16	41.96	6.54	33.18	8.15	21.70
1.77	41.93	17.16	41.96	6.54	33.18	8.15	21.70
2.51	39.66	14.67	44.84	8.70	20.50	8.23	23.05
2.51	39.66	14.67	44.84	8.70	20.50	8.23	23.05
3.94	40.59	20.84	51.35	7.49	22.03	8.27	26.19
3.94	40.59	20.84	51.35	7.49	22.03	8.27	26.19
3.70	54.15	19.77	56.17	7.18	45.40	9.48	33.02
3.70	54.15	19.77	56.17	7.18	45.40	9.48	33.02
2.94	44.64	16.39	55.53	7.45	41.93	10.29	36.95
2.94	44.64	16.39	55.53	7.45	41.93	10.29	36.95
3.21	33.31	10.20	43.74	3.91	26.31	5.69	24.48
3.21	33.31	10.20	43.74	3.91	26.31	5.69	24.48
4.79	54.62	18.67	50.51	4.60	42.52	10.36	29.08
4.79	54.62	18.67	50.51	4.60	42.52	10.36	29.08
1.82	47.34	12.71	49.87	5.58	36.68	9.27	25.61
1.82	47.34	12.71	49.87	5.58	36.68	9.27	25.61
3.62	48.62	13.70	48.91	5.29	43.04	6.35	30.15
3.62	48.62	13.70	48.91	5.29	43.04	6.35	30.15
2.91	39.05	16.25	46.90	6.31	29.76	7.24	25.53
2.91	39.05	16.25	46.90	6.31	29.76	7.24	25.53
2.88	42.48	9.61	50.46	7.09	39.29	6.51	28.12
2.88	42.48	9.61	50.46	7.09	39.29	6.51	28.12
5.10	42.60	21.02	56.37	10.33	38.26	12.50	29.77
5.10	42.60	21.02	56.37	10.33	38.26	12.50	29.77
4.07	38.25	19.86	51.63	5.95	33.56	9.52	33.96
4.07	38.25	19.86	51.63	5.95	33.56	9.52	33.96
3.87	46.05	14.44	53.70	7.24	43.21	10.79	27.71
3.87	46.05	14.44	53.70	7.24	43.21	10.79	27.71

Water %							
br meat	br skin	th meat	th skin	dr meat	dr skin	wg meat	wg skin
73.51	39.10	64.99	35.52	73.45	42.22	72.62	53.06
73.51	39.10	64.99	35.52	73.45	42.22	72.62	53.06
73.26	50.23	65.93	44.30	73.61	56.75	69.63	61.36
73.26	50.23	65.93	44.30	73.61	56.75	69.63	61.36
74.67	49.08	67.01	41.31	75.21	59.35	72.66	55.78
74.67	49.08	67.01	41.31	75.21	59.35	72.66	55.78
75.04	50.76	69.70	45.77	76.40	55.02	73.78	57.80
75.04	50.76	69.70	45.77	76.40	55.02	73.78	57.80
75.35	40.11	66.34	37.29	75.86	44.35	72.91	56.43
75.35	40.11	66.34	37.29	75.86	44.35	72.91	56.43
74.26	45.70	65.33	41.84	74.65	56.27	72.14	60.32
74.26	45.70	65.33	41.84	74.65	56.27	72.14	60.32
72.77	41.27	64.45	38.63	75.71	48.89	69.99	54.20
72.77	41.27	64.45	38.63	75.71	48.89	69.99	54.20
73.59	46.42	67.29	42.75	74.41	52.31	73.44	62.77
73.59	46.42	67.29	42.75	74.41	52.31	73.44	62.77
74.11	47.12	67.36	38.05	75.43	49.62	72.98	56.91
74.11	47.12	67.36	38.05	75.43	49.62	72.98	56.91
73.57	36.76	70.09	48.13	66.91	37.79	73.18	56.31
73.57	36.76	70.09	48.13	66.91	37.79	73.18	56.31
74.15	46.09	67.51	44.11	75.78	53.81	73.49	61.16
74.15	46.09	67.51	44.11	75.78	53.81	73.49	61.16
74.97	44.72	64.89	37.08	75.33	45.43	72.82	57.85
74.97	44.72	64.89	37.08	75.33	45.43	72.82	57.85
74.11	36.92	63.40	31.88	74.43	43.64	71.42	49.70
74.11	36.92	63.40	31.88	74.43	43.64	71.42	49.70
75.10	47.83	67.55	46.34	75.34	53.79	74.05	63.87
75.10	47.83	67.55	46.34	75.34	53.79	74.05	63.87
75.23	48.87	68.16	44.06	75.54	58.17	72.92	59.57
75.23	48.87	68.16	44.06	75.54	58.17	72.92	59.57
74.60	48.56	64.96	38.68	75.14	62.24	73.02	58.81
74.60	48.56	64.96	38.68	75.14	62.24	73.02	58.81
73.82	39.92	64.64	35.02	74.13	45.04	70.48	53.09
73.82	39.92	64.64	35.02	74.13	45.04	70.48	53.09
75.00	41.01	66.86	35.21	73.80	45.72	70.72	50.98
75.00	41.01	66.86	35.21	73.80	45.72	70.72	50.98
75.62	49.81	69.50	44.17	75.09	56.36	73.22	59.89
75.62	49.81	69.50	44.17	75.09	56.36	73.22	59.89
73.32	37.20	67.20	40.67	75.95	45.51	72.49	56.92
73.32	37.20	67.20	40.67	75.95	45.51	72.49	56.92
74.79	44.34	68.73	39.14	75.45	51.11	73.28	59.38
74.79	44.34	68.73	39.14	75.45	51.11	73.28	59.38
73.90	42.85	68.10	40.74	75.07	47.92	72.74	56.64
73.90	42.85	68.10	40.74	75.07	47.92	72.74	56.64
75.35	48.08	67.31	39.45	75.54	56.41	74.04	58.14
75.35	48.08	67.31	39.45	75.54	56.41	74.04	58.14
73.72	44.59	68.70	38.46	75.48	45.21	72.41	57.81
73.72	44.59	68.70	38.46	75.48	45.21	72.41	57.81
71.09	43.89	61.77	35.71	72.42	46.86	68.37	57.97
71.09	43.89	61.77	35.71	72.42	46.86	68.37	57.97
70.85	49.60	62.11	40.75	75.92	53.39	70.31	54.44
70.85	49.60	62.11	40.75	75.92	53.39	70.31	54.44
72.31	45.19	69.64	38.32	75.05	45.51	71.47	58.91
72.31	45.19	69.64	38.32	75.05	45.51	71.47	58.91

18.31	11.37	19.70	12.17	4.55	47.52	14.05	54.25	7.07	43.33	8.69	34.98	72.13	41.43	67.42	35.88	74.62	45.31	71.61	52.85
18.31	11.37	19.70	12.17	4.55	47.52	14.05	54.25	7.07	43.33	8.69	34.98	72.13	41.43	67.42	35.88	74.62	45.31	71.61	52.85
19.06	16.27	22.02	16.29	5.46	50.12	20.77	61.16	6.50	40.91	9.61	34.16	70.84	38.75	60.27	30.31	74.44	42.81	68.37	49.55
19.06	16.27	22.02	16.29	5.46	50.12	20.77	61.16	6.50	40.91	9.61	34.16	70.84	38.75	60.27	30.31	74.44	42.81	68.37	49.55
17.61	11.80	18.52	14.21	3.97	50.96	19.08	56.72	10.51	46.52	9.92	31.26	72.29	39.47	63.94	34.80	71.88	41.68	71.55	54.52
17.61	11.80	18.52	14.21	3.97	50.96	19.08	56.72	10.51	46.52	9.92	31.26	72.29	39.47	63.94	34.80	71.88	41.68	71.55	54.52
18.33	14.58	4.59	9.72	5.60	50.64	20.41	60.32	8.78	40.46	25.65	26.88	71.16	40.15	62.50	30.38	72.89	44.96	69.76	63.39
18.33	14.58	4.59	9.72	5.60	50.64	20.41	60.32	8.78	40.46	25.65	26.88	71.16	40.15	62.50	30.38	72.89	44.96	69.76	63.39
18.71	18.99	21.66	12.07	3.68	37.98	12.86	49.30	7.99	29.42	8.62	29.30	72.81	46.78	68.36	40.68	73.30	51.59	69.72	58.63
18.71	18.99	21.66	12.07	3.68	37.98	12.86	49.30	7.99	29.42	8.62	29.30	72.81	46.78	68.36	40.68	73.30	51.59	69.72	58.63
20.05	12.74	22.06	15.03	3.39	42.29	13.27	64.65	5.29	42.55	6.91	31.46	70.99	42.09	67.83	35.35	74.66	44.71	71.02	53.50
20.05	12.74	22.06	15.03	3.39	42.29	13.27	64.65	5.29	42.55	6.91	31.46	70.99	42.09	67.83	35.35	74.66	44.71	71.02	53.50
20.04	11.44	19.32	12.23	5.65	52.61	18.89	56.21	8.21	46.70	8.27	35.67	70.66	35.58	63.20	33.25	71.75	41.87	72.41	52.10
20.04	11.44	19.32	12.23	5.65	52.61	18.89	56.21	8.21	46.70	8.27	35.67	70.66	35.58	63.20	33.25	71.75	41.87	72.41	52.10
19.21	11.37	18.49	11.89	4.38	47.33	18.12	46.93	10.01	42.95	9.95	30.50	71.79	44.41	63.82	40.20	70.78	45.68	71.56	57.61
19.21	11.37	18.49	11.89	4.38	47.33	18.12	46.93	10.01	42.95	9.95	30.50	71.79	44.41	63.82	40.20	70.78	45.68	71.56	57.61
18.28	9.62	21.08	13.90	4.75	39.17	17.37	53.77	10.17	43.43	10.14	29.12	72.46	43.08	64.72	37.91	71.56	46.95	68.78	56.98
18.28	9.62	21.08	13.90	4.75	39.17	17.37	53.77	10.17	43.43	10.14	29.12	72.46	43.08	64.72	37.91	71.56	46.95	68.78	56.98
20.09	9.32	21.34	0.00	5.74	54.70	21.03	61.30	9.89	55.73	12.30	68.53	71.47	33.08	61.33	31.97	70.02	34.95	66.36	31.47
20.09	9.32	21.34	0.00	5.74	54.70	21.03	61.30	9.89	55.73	12.30	68.53	71.47	33.08	61.33	31.97	70.02	34.95	66.36	31.47
19.21	15.38	22.33	14.16	3.79	41.10	16.40	48.89	7.73	32.44	6.80	26.13	72.99	46.04	66.89	41.06	73.06	52.18	70.87	59.72
19.21	15.38	22.33	14.16	3.79	41.10	16.40	48.89	7.73	32.44	6.80	26.13	72.99	46.04	66.89	41.06	73.06	52.18	70.87	59.72
16.05	26.35	20.25	18.85	2.81	44.68	14.81	49.57	8.87	25.32	8.84	24.99	72.28	42.41	67.86	38.16	75.08	48.33	70.91	56.16
16.05	26.35	20.25	18.85	2.81	44.68	14.81	49.57	8.87	25.32	8.84	24.99	72.28	42.41	67.86	38.16	75.08	48.33	70.91	56.16
18.84	11.86	0.00	16.92	4.78	48.74	20.18	56.91	10.36	47.71	30.25	34.09	71.41	36.52	62.33	31.51	70.80	40.44	69.75	48.99
18.84	11.86	0.00	16.92	4.78	48.74	20.18	56.91	10.36	47.71	30.25	34.09	71.41	36.52	62.33	31.51	70.80	40.44	69.75	48.99
19.64	6.63	20.63	9.38	5.37	50.65	24.65	57.56	11.48	51.97	11.25	34.77	71.74	39.09	58.73	34.26	68.88	41.40	68.11	55.84
19.64	6.63	20.63	9.38	5.37	50.65	24.65	57.56	11.48	51.97	11.25	34.77	71.74	39.09	58.73	34.26	68.88	41.40	68.11	55.84
18.77	11.74	21.14	11.38	4.84	49.24	16.27	59.58	10.59	47.57	11.28	34.88	70.23	39.54	64.64	32.22	70.64	40.69	67.58	53.74
18.77	11.74	21.14	11.38	4.84	49.24	16.27	59.58	10.59	47.57	11.28	34.88	70.23	39.54	64.64	32.22	70.64	40.69	67.58	53.74
19.52	16.87	21.50	11.54	3.01	42.52	16.88	52.25	7.94	41.39	8.04	32.32	72.07	43.84	67.27	36.84	72.54	41.74	70.45	56.13
19.52	16.87	21.50	11.54	3.01	42.52	16.88	52.25	7.94	41.39	8.04	32.32	72.07	43.84	67.27	36.84	72.54	41.74	70.45	56.13
20.14	11.00	18.94	13.83	4.51	53.71	17.03	63.60	8.18	52.00	10.76	39.16	70.67	34.37	66.69	29.86	71.69	37.00	70.31	47.01
20.14	11.00	18.94	13.83	4.51	53.71	17.03	63.60	8.18	52.00	10.76	39.16	70.67	34.37	66.69	29.86	71.69	37.00	70.31	47.01
18.87	14.09	19.51	19.82	5.05	44.49	18.28	51.85	10.22	38.84	10.02	22.29	70.62	44.24	63.52	38.92	70.91	47.07	70.47	57.89
18.87	14.09	19.51	19.82	5.05	44.49	18.28	51.85	10.22	38.84	10.02	22.29	70.62	44.24	63.52	38.92	70.91	47.07	70.47	57.89
21.39	6.91	20.02	13.17	5.17	49.14	18.50	56.21	7.48	52.70	11.67	34.91	70.20	41.56	62.54	33.26	71.12	40.39	68.32	51.92
21.39	6.91	20.02	13.17	5.17	49.14	18.50	56.21	7.48	52.70	11.67	34.91	70.20	41.56	62.54	33.26	71.12	40.39	68.32	51.92
20.17	15.93	20.50	18.14	2.93	40.95	16.06	49.89	5.85	34.28	9.02	21.25	74.09	43.29	68.27	36.37	73.98	49.78	70.48	60.61
20.17	15.93	20.50	18.14	2.93	40.95	16.06	49.89	5.85	34.28	9.02	21.25	74.09	43.29	68.27	36.37	73.98	49.78	70.48	60.61
16.60	14.85	18.80	15.00	4.42	41.38	9.04	55.07	15.06	41.08	10.21	32.39	71.11	44.98	67.28	33.95	68.34	44.07	70.99	52.61
16.60	14.85	18.80	15.00	4.42	41.38	9.04	55.07	15.06	41.08	10.21	32.39	71.11	44.98	67.28	33.95	68.34	44.07	70.99	52.61
17.97	11.98	21.66	13.25	5.13	50.50	17.00	60.22	10.90	46.53	8.82	40.54	71.91	38.17	63.86	29.58	71.13	41.50	69.52	46.21
17.97	11.98	21.66	13.25	5.13	50.50	17.00	60.22	10.90	46.53	8.82	40.54	71.91	38.17	63.86	29.58	71.13	41.50	69.52	46.21
26.15	10.17	20.83	10.07	5.24	50.89	36.04	24.82	10.80	51.47	9.92	44.83	70.40	37.56	28.95	72.20	63.05	38.36	69.24	45.10
26.15	10.17	20.83	10.07	5.24	50.89	36.04	24.82	10.80	51.47	9.92	44.83	70.40	37.56	28.95	72.20	63.05	38.36	69.24	45.10
20.10	10.68	20.70	9.00	4.76	54.96	17.13	61.83	10.59	52.21	12.81	46.55	70.56	36.46	64.50	30.58	69.30	37.11	66.49	44.45
20.10	10.68	20.70	9.00	4.76	54.96	17.13	61.83	10.59	52.21	12.81	46.55	70.56	36.46	64.50	30.58	69.30	37.11	66.49	44.45
19.72	10.01	21.57	12.43	3.90	48.09	15.20	51.96	7.73	45.02	9.04	39.00	72.04	41.91	67.40	36.06	72.55	44.97	69.39	48.57
19.72	10.01	21.57	12.43	3.90	48.09	15.20	51.96	7.73	45.02	9.04	39.00	72.04	41.91	67.40	36.06	72.55	44.97	69.39	48.57
20.10	12.07	20.98	11.79	8.06	60.49	21.90	67.32	8.42	51.72	11.33	48.16	68.89	33.12	59.96	26.27	71.48	36.21	67.69	40.05
20.10	12.07	20.98	11.79	8.06	60.49	21.90	67.32	8.42	51.72	11.33	48.16	68.89	33.12	59.96	26.27	71.48	36.21	67.69	40.05
20.17	13.58	20.99	10.69	4.82	43.79	19.31	58.27	7.14	45.20	9.08	41.21	71.60	41.00	63.01	32.56	72.69	41.22	69.93	48.10
20.17	13.58	20.99	10.69	4.82	43.79	19.31	58.27	7.14	45.20	9.08	41.21	71.60	41.00	63.01	32.56	72.69	41.22	69.93	48.10
18.60	9.81	19.45	10.85	5.84	59.50	21.08	64.94	9.63	55.03	10.07	46.14	69.50	31.84	61.27	26.27	71.78	35.15	70.48	43.01
18.60	9.81	19.45	10.85	5.84	59.50	21.08	64.94	9.63	55.03	10.07	46.14	69.50	31.84	61.27	26.27	71.78	35.15	70.48	43.01

19.55	16.04	21.04	13.50	5.48	39.76	14.16	52.92	6.31	36.60	8.77	33.66	71.52	44.23	67.34	38.33	74.14	47.35	70.19	52.84
19.55	16.04	21.04	13.50	5.48	39.76	14.16	52.92	6.31	36.60	8.77	33.66	71.52	44.23	67.34	38.33	74.14	47.35	70.19	52.84
20.25	8.42	22.52	13.20	4.93	58.11	16.90	72.46	7.83	58.85	10.79	46.70	70.20	31.38	64.09	21.64	71.93	32.73	66.69	40.10
20.25	8.42	22.52	13.20	4.93	58.11	16.90	72.46	7.83	58.85	10.79	46.70	70.20	31.38	64.09	21.64	71.93	32.73	66.69	40.10
20.07	11.46	19.86	8.90	5.51	65.73	17.15	73.23	8.88	59.76	14.61	51.98	69.48	27.58	63.25	19.81	71.05	28.79	65.53	39.12
20.07	11.46	19.86	8.90	5.51	65.73	17.15	73.23	8.88	59.76	14.61	51.98	69.48	27.58	63.25	19.81	71.05	28.79	65.53	39.12
19.39	12.59	19.96	11.63	4.03	50.27	17.50	58.18	9.79	48.64	9.68	41.96	71.87	39.44	65.02	31.33	70.82	38.77	70.36	46.42
19.39	12.59	19.96	11.63	4.03	50.27	17.50	58.18	9.79	48.64	9.68	41.96	71.87	39.44	65.02	31.33	70.82	38.77	70.36	46.42
19.36	15.73	20.51	13.31	4.61	50.98	16.18	63.67	7.27	43.41	8.30	38.35	71.04	38.40	65.60	28.07	73.37	40.86	71.19	48.33
19.36	15.73	20.51	13.31	4.61	50.98	16.18	63.67	7.27	43.41	8.30	38.35	71.04	38.40	65.60	28.07	73.37	40.86	71.19	48.33
19.71	8.91	19.64	12.55	5.68	48.01	18.60	64.11	9.55	54.55	12.55	43.71	70.46	37.03	61.74	28.37	70.75	36.55	67.81	43.74
19.71	8.91	19.64	12.55	5.68	48.01	18.60	64.11	9.55	54.55	12.55	43.71	70.46	37.03	61.74	28.37	70.75	36.55	67.81	43.74
18.59	10.02	20.22	12.51	4.92	45.02	15.43	52.98	9.18	47.78	10.31	35.71	71.95	43.05	67.40	37.22	72.22	42.20	69.47	51.77
18.59	10.02	20.22	12.51	4.92	45.02	15.43	52.98	9.18	47.78	10.31	35.71	71.95	43.05	67.40	37.22	72.22	42.20	69.47	51.77
23.91	14.67	20.54	12.63	4.07	42.85	16.77	67.65	4.74	50.18	10.72	41.27	71.74	41.22	65.61	32.35	71.35	35.14	68.74	46.10
23.91	14.67	20.54	12.63	4.07	42.85	16.77	67.65	4.74	50.18	10.72	41.27	71.74	41.22	65.61	32.35	71.35	35.14	68.74	46.10
19.94	22.56	18.09	38.64	4.71	55.73	20.69	64.34	7.55	41.69	11.95	14.41	70.28	33.94	61.97	25.95	72.51	35.76	69.97	46.95
19.94	22.56	18.09	38.64	4.71	55.73	20.69	64.34	7.55	41.69	11.95	14.41	70.28	33.94	61.97	25.95	72.51	35.76	69.97	46.95
19.09	7.96	18.86	11.31	4.80	53.06	19.95	66.64	10.94	56.19	12.96	43.19	70.94	35.35	62.37	26.91	69.97	35.85	68.18	45.50
19.09	7.96	18.86	11.31	4.80	53.06	19.95	66.64	10.94	56.19	12.96	43.19	70.94	35.35	62.37	26.91	69.97	35.85	68.18	45.50
20.26	11.06	18.63	9.75	4.58	53.13	20.04	64.20	9.27	52.46	11.55	44.58	72.19	37.82	62.93	28.10	70.47	36.48	69.82	45.67
20.26	11.06	18.63	9.75	4.58	53.13	20.04	64.20	9.27	52.46	11.55	44.58	72.19	37.82	62.93	28.10	70.47	36.48	69.82	45.67
19.35	6.87	20.95	9.96	5.43	54.90	37.49	65.84	9.26	57.93	11.68	46.60	69.84	33.40	62.51	27.50	71.38	35.20	67.38	43.43
19.35	6.87	20.95	9.96	5.43	54.90	37.49	65.84	9.26	57.93	11.68	46.60	69.84	33.40	62.51	27.50	71.38	35.20	67.38	43.43
19.98	10.53	19.48	11.67	4.19	53.09	13.83	61.27	6.79	54.02	10.97	41.48	72.24	35.94	67.15	30.69	73.23	35.46	69.55	46.85
19.98	10.53	19.48	11.67	4.19	53.09	13.83	61.27	6.79	54.02	10.97	41.48	72.24	35.94	67.15	30.69	73.23	35.46	69.55	46.85
19.80	13.29	3.75	12.57	5.10	50.50	20.99	68.03	9.24	39.75	28.26	37.95	70.45	40.65	61.09	31.97	70.96	46.96	67.99	49.48
19.80	13.29	3.75	12.57	5.10	50.50	20.99	68.03	9.24	39.75	28.26	37.95	70.45	40.65	61.09	31.97	70.96	46.96	67.99	49.48
19.54	10.37	18.41	12.36	4.11	54.10	17.19	67.21	8.21	60.38	14.17	41.28	71.17	36.00	64.21	25.81	72.25	29.24	67.42	46.36
19.54	10.37	18.41	12.36	4.11	54.10	17.19	67.21	8.21	60.38	14.17	41.28	71.17	36.00	64.21	25.81	72.25	29.24	67.42	46.36
19.62	15.34	20.92	13.74	4.01	39.01	16.66	45.48	9.97	35.81	10.39	29.87	72.10	48.68	65.42	42.53	70.41	48.85	68.69	56.39
19.62	15.34	20.92	13.74	4.01	39.01	16.66	45.48	9.97	35.81	10.39	29.87	72.10	48.68	65.42	42.53	70.41	48.85	68.69	56.39
18.94	8.46	20.63	14.54	3.76	42.26	15.22	54.46	7.40	46.66	9.74	33.41	71.32	43.47	68.02	34.77	73.66	44.88	69.62	52.05
18.94	8.46	20.63	14.54	3.76	42.26	15.22	54.46	7.40	46.66	9.74	33.41	71.32	43.47	68.02	34.77	73.66	44.88	69.62	52.05
19.75	12.57	19.80	11.48	4.03	44.91	14.96	60.95	9.39	44.35	9.52	37.40	71.23	44.26	66.67	29.36	70.86	43.08	70.68	51.13
19.75	12.57	19.80	11.48	4.03	44.91	14.96	60.95	9.39	44.35	9.52	37.40	71.23	44.26	66.67	29.36	70.86	43.08	70.68	51.13
20.68	10.91	21.26	9.09	4.12	57.21	18.52	68.14	11.27	53.09	9.34	50.65	69.99	33.74	60.95	25.70	68.05	36.00	69.39	40.27
20.68	10.91	21.26	9.09	4.12	57.21	18.52	68.14	11.27	53.09	9.34	50.65	69.99	33.74	60.95	25.70	68.05	36.00	69.39	40.27
20.97	12.87	20.81	17.36	3.81	52.58	15.86	67.09	8.07	49.09	8.19	42.85	70.97	37.87	64.42	25.31	70.96	38.05	71.01	39.79
20.97	12.87	20.81	17.36	3.81	52.58	15.86	67.09	8.07	49.09	8.19	42.85	70.97	37.87	64.42	25.31	70.96	38.05	71.01	39.79
20.54	9.70	22.09	11.76	4.05	50.40	13.11	60.10	7.41	46.93	7.21	39.92	70.56	38.15	68.13	30.59	72.05	43.37	70.70	48.31
20.54	9.70	22.09	11.76	4.05	50.40	13.11	60.10	7.41	46.93	7.21	39.92	70.56	38.15	68.13	30.59	72.05	43.37	70.70	48.31
20.09	3.41	48.14	6.05	4.64	57.25	16.33	71.77	8.43	27.66	19.68	25.13	70.18	32.42	64.91	22.62	71.48	68.93	32.18	68.82
20.09	3.41	48.14	6.05	4.64	57.25	16.33	71.77	8.43	27.66	19.68	25.13	70.18	32.42	64.91	22.62	71.48	68.93	32.18	68.82
19.70	10.34	20.78	7.74	4.40	47.28	18.78	64.21	9.53	55.05	9.08	48.43	70.97	38.08	63.51	28.49	70.77	34.61	70.14	43.83
19.70	10.34	20.78	7.74	4.40	47.28	18.78	64.21	9.53	55.05	9.08	48.43	70.97	38.08	63.51	28.49	70.77	34.61	70.14	43.83
19.33	18.55	20.45	9.97	4.52	56.96	21.33	68.99	12.53	43.66	9.18	44.77	70.10	36.15	60.77	23.56	68.14	37.79	70.37	45.26
19.33	18.55	20.45	9.97	4.52	56.96	21.33	68.99	12.53	43.66	9.18	44.77	70.10	36.15	60.77	23.56	68.14	37.79	70.37	45.26
17.81	12.81	20.04	11.62	5.72	44.60	13.04	51.13	13.03	40.56	7.79	38.50	70.88	41.78	66.98	36.93	69.16	46.63	72.17	49.88
17.81	12.81	20.04	11.62	5.72	44.60	13.04	51.13	13.03	40.56	7.79	38.50	70.88	41.78	66.98	36.93	69.16	46.63	72.17	49.88
63.50	9.74	3.08	15.07	5.50	42.20	13.34	63.99	36.51	54.71	1.50	41.40	70.72	39.32	67.19	29.53	0.00	35.55	95.42	43.53
63.50	9.74	3.08	15.07	5.50	42.20	13.34	63.99	36.51	54.71	1.50	41.40	70.72	39.32	67.19	29.53	0.00	35.55	95.42	43.53
20.91	6.98	19.01	10.57	5.68	63.48	20.10	71.08	15.61	65.83	14.60	51.73	69.55	28.22	61.92	22.29	63.49	27.19	66.39	37.70
20.91	6.98	19.01	10.57	5.68	63.48	20.10	71.08	15.61	65.83	14.60	51.73	69.55	28.22	61.92	22.29	63.49	27.19	66.39	37.70
22.07	13.58	20.52	11.08	3.79	40.01	16.35	57.01	7.57	47.22	7.60	38.99	69.78	42.82	64.75	30.56	70.36	39.19	71.88	49.93
22.07	13.58	20.52	11.08	3.79	40.01	16.35	57.01	7.57	47.22	7.60	38.99	69.78	42.82	64.75	30.56	70.36	39.19	71.88	49.93

19.41	7.85	20.05	12.61	4.15	47.29	16.69	56.09	9.88	52.47	9.85	39.05	71.00	42.29	65.30	35.88	70.71	39.67	70.10	48.35
19.41	7.85	20.05	12.61	4.15	47.29	16.69	56.09	9.88	52.47	9.85	39.05	71.00	42.29	65.30	35.88	70.71	39.67	70.10	48.35
48.97	3.70	44.25	2.84	4.35	60.98	40.22	37.06	30.70	27.48	29.00	29.48	71.26	29.43	30.15	60.39	20.32	68.82	26.74	67.68
48.97	3.70	44.25	2.84	4.35	60.98	40.22	37.06	30.70	27.48	29.00	29.48	71.26	29.43	30.15	60.39	20.32	68.82	26.74	67.68
19.73	15.08	21.72	14.49	4.56	37.42	14.10	52.80	9.66	40.86	8.94	49.37	68.84	41.65	65.79	35.71	70.61	44.06	69.35	36.14
19.73	15.08	21.72	14.49	4.56	37.42	14.10	52.80	9.66	40.86	8.94	49.37	68.84	41.65	65.79	35.71	70.61	44.06	69.35	36.14
5.78	6.01	20.53	10.73	6.24	57.41	14.56	68.15	2.24	61.31	11.74	49.88	69.15	35.04	65.23	25.48	91.98	32.68	67.73	39.39
5.78	6.01	20.53	10.73	6.24	57.41	14.56	68.15	2.24	61.31	11.74	49.88	69.15	35.04	65.23	25.48	91.98	32.68	67.73	39.39
18.66	10.00	21.30	10.65	4.18	60.76	17.92	66.82	12.35	58.44	12.69	48.12	71.81	32.62	63.10	25.51	68.99	31.56	66.01	41.23
18.66	10.00	21.30	10.65	4.18	60.76	17.92	66.82	12.35	58.44	12.69	48.12	71.81	32.62	63.10	25.51	68.99	31.56	66.01	41.23
19.21	6.42	20.34	12.29	6.02	61.14	19.34	69.04	12.68	59.93	12.29	51.12	69.92	32.89	60.62	24.32	68.11	33.65	67.37	36.59
19.21	6.42	20.34	12.29	6.02	61.14	19.34	69.04	12.68	59.93	12.29	51.12	69.92	32.89	60.62	24.32	68.11	33.65	67.37	36.59
19.50	8.05	20.97	13.19	6.31	56.39	19.01	64.20	12.00	55.90	10.22	40.33	70.53	35.37	61.94	27.95	68.50	36.05	68.81	46.48
19.50	8.05	20.97	13.19	6.31	56.39	19.01	64.20	12.00	55.90	10.22	40.33	70.53	35.37	61.94	27.95	68.50	36.05	68.81	46.48
20.88	10.09	20.76	8.17	5.13	63.57	17.94	70.50	10.42	53.36	11.17	47.74	69.73	29.39	63.43	21.88	68.70	36.55	68.07	44.09
20.88	10.09	20.76	8.17	5.13	63.57	17.94	70.50	10.42	53.36	11.17	47.74	69.73	29.39	63.43	21.88	68.70	36.55	68.07	44.09
19.58	13.38	22.59	16.30	7.63	56.99	15.94	66.96	10.45	55.19	10.32	45.85	69.33	33.55	64.91	27.32	69.97	31.44	67.09	37.86
19.58	13.38	22.59	16.30	7.63	56.99	15.94	66.96	10.45	55.19	10.32	45.85	69.33	33.55	64.91	27.32	69.97	31.44	67.09	37.86
21.68	7.61	22.18	10.46	5.54	86.41	19.62	67.93	8.60	62.17	10.69	52.29	70.41	0.00	61.77	23.88	69.71	30.21	67.12	37.24
21.68	7.61	22.18	10.46	5.54	86.41	19.62	67.93	8.60	62.17	10.69	52.29	70.41	0.00	61.77	23.88	69.71	30.21	67.12	37.24
20.94	12.44	32.35	18.05	5.66	56.24	16.79	71.66	10.30	54.55	17.54	38.52	68.76	33.34	64.67	22.42	68.77	33.01	50.11	43.43
20.94	12.44	32.35	18.05	5.66	56.24	16.79	71.66	10.30	54.55	17.54	38.52	68.76	33.34	64.67	22.42	68.77	33.01	50.11	43.43
20.31	10.46	22.65	8.61	7.09	51.37	12.79	67.63	8.38	59.24	8.87	44.02	70.38	32.48	65.46	26.33	71.30	30.31	68.48	47.37
20.31	10.46	22.65	8.61	7.09	51.37	12.79	67.63	8.38	59.24	8.87	44.02	70.38	32.48	65.46	26.33	71.30	30.31	68.48	47.37
21.61	16.80	22.04	14.90	5.46	51.19	16.86	65.83	9.20	43.95	9.94	85.11	69.81	39.42	64.33	27.78	69.19	39.25	68.02	0.00
21.61	16.80	22.04	14.90	5.46	51.19	16.86	65.83	9.20	43.95	9.94	85.11	69.81	39.42	64.33	27.78	69.19	39.25	68.02	0.00

Age	Pen No	Strain	Feed	Sex	B Weight	F-B W	Breast	Brst Skin	Thighs	Th Meat	Th Skin	Drums	Dr Meat	Dr Skin	Wings	Wg Meat	Wg Skin	Abd Fat
1	*	H	*	F	41.02	*	0.5	0.5	2.6	2.0	0.4	2.6	1.7	0.2	1.2	*	0.4	*
1	*	H	*	F	40.77	*	0.9	0.2	2.9	1.9	0.3	2.0	1.3	0.1	1.3	*	*	*
1	*	H	*	F	36.94	*	0.3	0.7	2.5	1.7		2.5	1.5	0.2	0.9	*	0.2	*
1	*	H	*	F	42.37	*	0.5	0.4	2.9	2.2	0.2	2.4	1.6	0.4	1.0	*	0.8	*
1	*	H	*	F	41.72	*	0.6	0.5	2.1	1.5	0.5	1.9	1.0	0.4	1.5	*	0.1	*
1	*	H	*	F	39.39	*	0.9	0.4	3.4	1.8	0.4	1.5	1.0	0.3	1.3	*	0.3	*
1	*	H	*	F	33.91	*	0.4	0.5	2.5	1.7	0.3	2.4	1.5	0.4	0.9	*	0.5	*
1	*	H	*	M	33.61	*	0.6	0.6	2.8	1.8	0.3	1.6	1.0	0.2	1.0	*	0.6	*
1	*	H	*	M	38.99	*	0.5	0.9	2.5	1.8	0.3	2.2	1.5	0.4	0.9	*	0.4	*
1	*	H	*	M	31.08	*	0.4	0.6	2.0	1.5	0.3	2.0	1.5	0.2	0.8	*	*	*
1	*	H	*	M	33.82	*	0.5	0.4	2.5	1.2	0.6	1.9	1.3	0.8	0.8	*	0.5	*
1	*	H	*	M	36.97	*	0.6	0.5	2.1	1.6	0.6	2.4	1.3	0.5	1.2	*	0.5	*
1	*	H	*	M	37.60	*	0.6	0.6	2.3	1.8	0.5	2.1	1.2	0.5	1.2	*	0.6	*
1	*	H	*	M	37.20	*	0.5	0.8	2.5	2.0	0.3	2.6	1.8	0.6	1.0	*	0.7	*
1	*	H	*	M	36.56	*	0.6	0.6	2.4	1.8	0.2	2.6	1.6	0.5	0.9	*	0.6	*
1	*	C	*	F	43.43	*	0.8	0.6	2.9	2.3	0.5	2.2	1.7	0.6	1.2	*	0.9	*
1	*	C	*	F	48.13	*	0.7	0.8	3.3	2.5	0.5	2.6	2.0	0.6	1.4	*	0.7	*
1	*	C	*	F	47.51	*	1.0	0.7	2.9	2.2	0.3	3.1	2.1	0.8	1.4	*	0.8	*
1	*	C	*	F	51.51	*	1.0	0.8	3.6	2.5	0.4	2.6	1.8	0.8	1.1	*	0.6	*
1	*	C	*	F	44.52	*	0.8	0.8	3.3	2.6	0.4	3.1	2.0	0.4	1.2	*	0.5	*
1	*	C	*	F	43.39	*	0.5	0.2	2.6	1.9	0.5	2.7	1.8	0.3	1.3	*	0.2	*
1	*	C	*	F	43.67	*	0.8	0.8	2.8	2.3	0.3	2.9	2.0	0.3	0.8	*	0.8	*
1	*	C	*	F	45.30	*	0.9	1.0	2.9	1.9	0.4	2.3	1.8	0.5	1.4	*	0.7	*
1	*	C	*	F	47.24	*	0.7	0.1	2.6	2.0	0.3	2.1	1.4	0.4	1.4	*	0.3	*
1	*	C	*	M	43.30	*	1.0	0.3	2.9	2.1	0.3	2.8	1.8	0.5	1.0	*	0.4	*
1	*	C	*	M	48.86	*	0.8	0.8	3.0	2.2	0.5	2.8	1.9	0.6	1.4	*	0.7	*
1	*	C	*	M	39.39	*	0.3	0.8	1.9	1.3	0.5	1.5	0.9	0.3	0.8	*	0.7	*
1	*	C	*	M	40.02	*	0.5	0.6	2.9	2.2	0.2	2.6	1.7	0.4	0.9	*	0.6	*
1	*	C	*	M	41.23	*	0.9	0.5	3.2	2.4	0.4	2.8	2.0	0.5	1.1	*	0.8	*
1	*	C	*	M	49.21	*	0.8	0.8	2.5	2.1	0.5	3.0	2.0	0.6	1.3	*	0.6	*
1	*	C	*	M	47.30	*	0.8	0.9	3.6	2.7	0.2	3.1	2.2	0.6	1.0	*	0.6	*
1	*	C	*	M	41.76	*	0.9	0.7	2.6	1.7	0.5	2.2	1.6	0.6	1.2	*	0.8	*
1	*	R	*	F	39.15	*	0.7	0.8	2.8	2.2	0.5	2.9	1.8	0.4	1.1	*	0.5	*
1	*	R	*	F	41.76	*	0.4	0.6	3.4	1.4	0.5	2.3	2.1	0.2	1.2	*	0.4	*
1	*	R	*	F	38.52	*	0.4	0.2	2.4	1.8	0.4	2.2	1.4	0.4	1.1	*	0.3	*
1	*	R	*	F	40.82	*	0.6	0.9	2.5	1.8	0.3	2.8	1.7	0.6	1.2	*	0.4	*
1	*	R	*	F	48.28	*	0.6	0.8	3.1	2.4	0.6	3.0	1.9	0.3	1.5	*	0.5	*
1	*	R	*	F	37.90	*	0.6	0.9	2.7	2.1	0.3	2.6	1.7	0.4	1.1	*	0.3	*
1	*	R	*	M	41.64	*	0.4	0.3	2.9	2.2	0.8	3.0	1.8	0.3	1.6	*	0.3	*
1	*	R	*	M	41.17	*	0.5	0.5	2.7	2.0	0.4	2.9	1.7	0.4	1.1	*	0.7	*
1	*	R	*	M	40.81	*	0.7	0.9	2.7	2.0	0.5	2.8	1.8	0.5	1.1	*	0.3	*
1	*	R	*	M	39.22	*	0.5	0.3	2.0	1.5	0.3	2.3	1.3	0.3	0.9	*	0.3	*
1	*	R	*	M	44.58	*	0.9	0.4	3.3	2.5	0.6	3.2	2.2	0.9	1.3	*	0.3	*
1	*	R	*	M	49.26	*	0.7	0.6	2.9	2.0	0.8	3.5	2.3	0.4	1.3	*	1.1	*
1	*	R	*	M	45.12	*	0.6	0.5	3.7	2.9	0.5	3.7	2.6	0.9	1.3	*	0.4	*

1	*	R	*	M	46.09 *		0.9	0.8	2.9	2.3	0.5	3.5	2.2	0.5	1.3	*	0.9	*
2	7	C	3	M	616	606	81.6	9.9	54.0	43.3	8.3	43.0	31.2	7.9	25.2	12.7	8.9	8.3
2	7	C	3	M	620	611	69.2	9.7	54.8	42.6	8.6	42.8	26.5	9.1	31.1	13.4	9.9	7.8
2	8	R	2	F	397	391	50.8	4.4	31.7	22.3	6.5	28.5	18.3	2.2	21.9	10.0	5.6	2.4
2	8	R	2	F	421	414	51.9	4.5	33.6	24.6	5.9	25.8	16.6	3.9	25.0	11.2	5.5	5.3
2	9	H	2	F	477	465	68.6	5.7	43.7	25.7	5.6	36.8	24.6	3.3	29.2	13.0	6.8	3.7
2	9	H	2	F	475	467	63.3	5.3	47.3	36.2	9.2	32.9	21.9	3.6	28.6	16.0	6.7	4.2
2	10	C	1	M	541	523	73.0	6.1	48.5	37.9	4.5	45.5	31.3	9.3	33.4	15.9	8.1	2.2
2	10	C	1	M	517	508	58.9	5.9	45.8	34.0	6.5	38.0	23.3	3.2	30.2	12.4	6.3	6.3
2	11	R	3	F	363	356	43.5	5.2	30.1	24.8	5.4	24.8	17.1	1.5	20.1	9.5	5.2	4.9
2	11	R	3	F	308	304	30.4	4.0	24.8	19.7	2.8	23.5	14.6	5.5	17.2	6.8	4.3	3.1
2	12	H	4	M	358	355	38.5	7.0	27.4	21.7	4.8	29.5	20.5	3.1	21.2	9.1	4.4	2.2
2	12	H	4	M	398	392	47.8	5.0	32.8	25.0	5.6	31.1	19.8	2.1	23.5	12.1	5.3	4.1
2	13	C	4	M	419	410	42.2	6.9	34.4	27.1	3.0	29.6	16.6	2.3	24.0	9.4	4.2	2.9
2	13	C	4	M	475	450	50.8	5.6	46.9	35.9	4.2	34.0	22.8	7.8	33.4	16.4	5.8	4.3
2	14	H	1	M	523	514	65.4	5.7	45.9	36.1	5.4	42.2	28.1	5.6	31.0	13.1	6.3	2.4
2	14	H	1	M	481	474	56.8	8.8	37.3	31.7	5.7	41.8	26.4	4.9	25.4	9.5	5.8	3.7
2	15	C	1	F	481	466	69.1	6.1	43.7	33.9	3.3	36.5	25.6	5.1	26.5	14.5	5.9	3.4
2	15	C	1	F	502	490	65.2	6.8	45.0	36.9	6.4	38.3	26.2	4.3	29.7	13.1	7.5	4.6
2	16	C	4	F	373	365	43.3	7.0	20.9	13.6	1.5	30.4	22.6	6.2	20.5	9.1	5.0	5.6
2	16	C	4	F	378	369	45.0	4.9	36.8	28.2	4.8	25.4	16.7	4.8	20.6	8.9	4.9	5.2
2	17	R	2	M	400	396	40.6	4.4	31.9	24.7	6.0	28.4	18.6	2.6	20.9	8.7	5.9	5.4
2	17	R	2	M	380	377	47.7	4.9	30.5	24.6	3.9	29.6	19.6	3.7	22.7	10.1	2.9	5.0
2	18	H	3	M	502	495	63.6	6.6	42.1	33.3	6.7	39.5	29.3	3.9	26.2	13.6	7.2	6.1
2	18	H	3	M	438	431	52.2	5.7	37.7	29.1	3.5	34.0	20.5	5.5	27.3	11.0	6.4	6.8
2	31	R	4	F	321	315	28.4	3.6	26.0	19.7	8.1	22.4	13.7	2.7	20.9	10.9	3.8	3.7
2	31	R	4	F	300	293	26.9	4.4	23.9	18.4	3.3	20.8	12.6	4.4	15.9	7.5	6.4	3.9
2	32	H	2	M	479	472	62.8	6.5	43.5	35.6	4.2	39.8	28.3	4.8	26.2	11.6	5.4	4.0
2	32	H	2	M	475	469	62.6	6.8	39.9	28.8	4.8	39.2	25.7	2.8	29.6	13.1	5.7	5.6
2	33	H	1	F	486	475	54.5	6.6	40.7	33.1	7.5	38.4	27.0	2.7	28.4	14.7	7.9	5.0
2	33	H	1	F	400	391	45.6	3.7	32.9	26.1	3.8	31.9	21.8	3.5	27.6	14.8	4.8	2.5
2	34	H	3	F	393	386	49.0	5.9	32.1	27.1	6.1	32.2	22.1	1.7	25.3	13.6	6.3	5.0
2	34	H	3	F	409	400	45.8	4.0	35.3	26.4	4.7	25.4	17.4	2.8	22.7	10.1	5.2	3.9
2	35	H	4	F	427	418	46.6	7.8	33.2	27.9	6.2	30.0	21.6	4.8	22.5	11.2	5.6	6.6
2	35	H	4	F	388	38	40.8	7.1	32.5	26.0	4.5	30.1	20.6	4.1	23.1	9.8	5.0	5.8
2	36	R	4	M	403	400	42.1	5.1	33.8	25.4	5.2	28.6	18.6	4.8	23.2	11.3	5.0	3.3
2	36	R	4	M	331	327	31.3	3.3	25.6	20.8	3.0	26.4	17.9	2.9	19.7	9.2	4.8	4.7
2	37	R	1	F	394	387	51.3	5.3	32.9	26.8	4.2	32.0	22.6	4.0	22.6	9.2	5.2	3.3
2	37	R	1	F	426	415	59.1	5.2	34.5	26.5	5.6	36.0	23.7	2.2	28.1	12.5	6.3	2.7
2	38	C	3	F	415	405	51.3	5.6	32.2	25.6	6.9	30.6	20.9	4.8	24.5	12.1	8.1	3.4
2	38	C	3	F	417	408	51.1	8.2	33.4	27.3	5.0	31.9	22.0	4.5	25.3	12.0	6.0	4.4
2	39	R	3	M	391	385	40.4	5.8	31.8	26.4	6.2	33.1	22.1	2.1	23.4	11.6	4.5	4.0
2	39	R	3	M	376	372	39.0	4.7	34.6	25.7	3.5	27.6	18.2	4.3	22.2	11.5	4.0	4.0
2	40	C	2	F	513	501	76.6	7.7	46.1	39.2	5.3	39.0	27.9	5.3	30.4	14.9	7.8	6.6
2	40	C	2	F	339	331	42.2	5.2	26.5	21.1	2.9	24.8	16.0	2.8	19.9	8.2	4.9	3.6
2	41	R	1	M	412	406	42.7	3.1	37.3	28.2	5.3	32.8	21.9	3.5	24.8	11.5	5.6	3.4
2	41	R	1	M	405	401	52.3	4.8	27.6	21.7	5.4	31.3	22.2	1.7	25.5	13.0	5.6	5.2
2	42	C	2	M	600	589	80.2	8.2	53.6	44.9	6.0	50.4	35.8	7.0	34.6	17.7	8.0	7.9

2	42	C	2	M	571	558	85.7	7.4	47.3	39.4	4.3	42.6	31.0	6.6	31.6	17.7	8.6	8.0
4	7	C	3	M	1574	1524	261	24.3	147	123	19.9	138.0	97.1	22.5	87.8	46.8	24.9	14.3
4	7	C	3	M	1641	1596	261	15.7	149	121	38.0	126.0	81.2	12.8	43.2	24.1	14.2	26.0
4	8	R	2	F	977	959	138	11.7	94.0	74.8	10.7	71.1	47.3	12.5	59.8	31.7	19.7	15.3
4	8	R	2	F	1226	1198	182	18.7	117	91.6	20.6	103.0	71.1	9.3	70.2	42.7	25.4	19.9
4	9	H	2	F	1092	1066	161	13.9	86.8	67.0	8.1	86.6	61.0	13.2	63.0	31.7	15.9	15.5
4	9	H	2	F	923	894	135	9.1	79	63.6	10.1	66.4	49.1	12.0	59.4	33.0	16.3	11.6
4	10	C	1	M	1880	1827	351	26.6	191	173	25.6	155.0	111.0	23.8	93.3	56.0	29.3	23.6
4	10	C	1	M	1711	1672	259	20.3	166	143	25.5	138.0	107.0	15.8	99.4	57.3	30.0	25.6
4	11	R	3	F	1100	1084	139	14.8	105	83.5	24.8	81.8	54.6	10.2	73.7	43.3	23.6	22.3
4	11	R	3	F	1200	1187	172	17.8	100	79.0	24.0	93.5	67.6	11.9	77.4	45.3	20.8	25.4
4	12	H	4	M	1335	1313	223	24.2	120	101	16.2	108.0	77.9	16.2	79.2	41.9	19.5	25.1
4	12	H	4	M	1376	1356	216	16.2	124	103	9.5	117.0	84.2	23.3	78.6	43.9	21.8	31.3
4	13	C	4	M	1696	1646	254	26.5	146	120	32.4	123.0	79.9	14.5	89.4	51.4	29.4	39.6
4	13	C	4	M	1648	1598	253	18.6	153	130	15.4	123.0	92.2	23.3	90.3	47.8	24.8	25.2
4	14	H	1	M	1876	1851	342	23.6	179	150	25.6	154.0	114.2	13.7	107.0	63.0	32.7	17.9
4	14	H	1	M	1715	1669	306	18.4	159	136	24.4	140.0	104.0	14.1	92.6	54.7	28.4	20.9
4	15	C	1	F	1171	1124	191	10.5	104	83.9	17.3	86.4	57.6	7.5	73.8	41.1	19.5	12.9
4	15	C	1	F	1127	1094	209	14.3	98	74.8	15.0	83.4	55.9	8.2	54.7	26.1	19.4	13.1
4	16	C	4	F	909	887	105	9.7	76	62.4	17.8	68.2	50.7	10.0	57.8	32.4	20.6	17.9
4	16	C	4	F	1000	974	124	16.0	96	78.2	17.2	76.0	52.6	14.2	63.8	36.1	19.6	19.1
4	17	R	2	M	1425	1397	186	20.9	131	110	18.9	117.0	82.9	18.9	84.2	44.3	32.1	21.8
4	17	R	2	M	1483	1467	220	22.2	144	119	20.6	120.0	83.8	16.7	81.3	41.5	24.4	20.2
4	18	H	3	M	1488	1466	203	12.3	124	97.1	20.1	118.0	82.4	7.5	90.2	47.9	21.2	21.7
4	18	H	3	M	1467	1430	232	23.2	145	123	17.3	126.0	86.5	17.2	78.5	41.3	22.4	20.2
4	31	R	4	F	1256	1228	160	12.1	108	91.1	20.5	99.0	73.6	25.0	73.4	42.1	20.9	34.6
4	31	R	4	F	1099	1072	136	13.7	90	75.1	14.9	85.5	59.3	19.0	64.8	36.1	19.6	22.3
4	32	H	2	M	1600	1570	264	17.9	150	125	20.7	138.5	97.6	18.5	97.5	55.6	28.1	21.4
4	32	H	2	M	1550	1520	282	22.0	135	106	22.1	118.0	81.8	13.1	97.7	56.1	30.7	17.0
4	33	H	1	F	1481	1421	244	18.8	127	107	20.6	106.0	77.4	15.4	86.5	43.3	23.9	23.9
4	33	H	1	F	1082	1056	167	13.8	106	86.0	12.5	94.5	64.9	10.4	67.3	33.1	16.2	9.7
4	34	H	3	F	1275	1248	193	20.8	122	102	10.1	102.0	73.5	6.8	79.7	49.8	15.6	21.8
4	34	H	3	F	1258	1231	185	15.3	102	83.4	14.2	98.6	71.6	22.0	73.2	41.7	26.9	25.0
4	35	H	4	F	972	949	142	9.4	90	74.6	13.5	73.0	54.6	8.0	61.7	36.4	13.9	18.6
4	35	H	4	F	1174	1150	167	12.9	110	90.2	18.0	93.9	65.7	12.6	63.7	29.8	20.5	22.5
4	36	R	4	M	1423	1394	182	21.7	130	106	21.0	124	86.6	21.9	75.0	37.9	24.5	20.4
4	36	R	4	M	1387	1356	172	13.5	116	95.0	22.8	114	82.8	14.8	82.7	50.7	26.2	26.1
4	37	R	1	F	1302	1258	206	7.7	102	82.9	14.5	107	77.8	18.2	78.9	41.0	22.9	21.2
4	37	R	1	F	1193	1152	157	13.3	114	95.6	15.7	103	76.5	15.2	71.0	41.3	23.8	19.5
4	38	C	3	F	1172	1162	171	19.2	96	82.2	18.6	90	65.4	16.3	63.4	34.3	18.9	23.3
4	38	C	3	F	1364	1325	242	25.1	125	104	19.7	110	79.1	13.1	73.1	36.1	24.0	21.4
4	39	R	3	M	1400	1374	188	14.5	129	107	18.7	124	80.9	14.9	92.3	51.0	21.5	21.3
4	39	R	3	M	1440	1411	216	15.8	142	112	14.7	121	81.6	14.3	76.7	37.2	22.2	20.8
4	40	C	2	F	1169	1138	189	18.1	94	78.8	15.3	85	60.9	13.8	73.5	38.5	19.9	17.3
4	40	C	2	F	1427	1385	229	12.1	120	99.9	13.6	113	83.0	26.8	73.1	37.2	20.2	23.8
4	41	R	1	M	1523	1491	175	21.0	140	114	24.2	124	85.1	11.4	83.1	40.7	28.6	15.1
4	41	R	1	M	1480	1441	198	16.4	135	106	23.0	117	82.6	11.4	77.9	35.7	23.5	19.8
4	42	C	2	M	1887	1824	352	20.0	172	163	24.0	155	115	18.5	110	61.6	22.4	30.2

4	42	C	2	M	1904	1848	331	25.7	138	103	24.2	193	154	19.2	110	63.3	23.0	33.1
6	7	C	3	M	2914	2825	605	41.6	272	225	61.5	210	146	28.5	155	88.5	49.2	55.4
6	7	C	3	M	26.4	2562	558	41.7	258	218	35.6	225	154	29.1	151	83.1	38.2	30.0
6	8	R	2	F	2619	2545	456	31.4	242	204	31.8	223	161	30.5	146	90.0	43.0	69.2
6	8	R	2	F	2317	2258	398	38.7	211	180	50.2	203	141	19.9	132	70.9	36.4	46.1
6	9	H	2	F	2408	2323	447	34.5	223	194	31.0	173	134	25.5	163	113	50.5	48.7
6	9	H	2	F	2345	2259	479	34.9	230	198	31.7	183	136	27.0	144	79.0	35.3	40.0
6	10	C	1	M	3061	2947	569	47.1	284	229	39.4	263	180	26.2	178	107	47.1	30.3
6	10	C	1	M	3327	3230	621	54.3	335	292	45.1	293	222	34.9	186	109	48.1	54.2
6	11	R	3	F	268	2577	456	45.0	249	214	44.5	207	156	27.5	167	99.9	37.2	74.7
6	11	R	3	F	2558	2469	432	37.5	222	188	50.3	204	146	25.5	144	99.1	46.5	79.7
6	12	H	4	M	2864	2777	450	43.5	291	254	44.8	223	171	27.0	176	107	49.4	106.0
6	12	H	4	M	3002	2906	504	44.7	271	232	33.9	250	172	32.0	173	109	50.6	64.8
6	13	C	4	M	2592	2521	439	39.9	245	207	36.3	222	161	34.7	151	80.6	42.8	63.1
6	13	C	4	M	2472	239	433	48.2	249	207	49.0	196	137	17.3	138	70.9	37.7	63.9
6	14	H	1	M	2968	2857	570	31.1	286	237	42.9	276	191	18.1	180	106	53.3	41.7
6	14	H	1	M	3475	3372	759	37.7	330	275	50.8	288	206	19.9	200	118	54.3	83.4
6	15	C	1	F	2802	2701	601	34.1	309	278	39.6	226	178	32.0	160	108	42.7	52.0
6	15	C	1	F	3024	2961	619	43.5	306	261	53.7	231	180	29.5	178	111	42.5	94.8
6	16	C	4	F	2199	2118	355	27.0	216	185	45.0	178	135	29.2	130	80.3	33.0	64.5
6	16	C	4	F	2483	2408	457	42.4	226	198	60.6	185	141	19.4	133	77.2	44.8	98.5
6	17	R	2	M	2671	2600	442	33.7	244	198	41.3	219	161	22.9	160	90.4	46.0	47.2
6	17	R	2	M	2769	2669	387	33.3	296	248	51.3	251	182	46.5	164	98.8	27.6	48.8
6	18	H	3	M	2754	2665	491	24.2	239	198	41.9	252	187	20.2	187	118	39.8	62.8
6	18	H	3	M	2672	2588	443	41.9	268	215	26.8	231	174	35.6	149	83.9	38.6	54.5
6	31	R	4	F	2112	2024	328	35.3	207	173	34.7	184	136	18.4	128	67.5	32.0	53.8
6	31	R	4	F	2256	2172	271	14.6	213	182	53.6	203	149	20.7	146	87.2	39.7	69.5
6	32	H	2	M	3003	2878	523	40.1	276	228	37.7	250	182	25.7	170	101	42.3	63.1
6	32	H	2	M	2943	2874	557	43.5	294	245	27.4	277	197	31.4	190	104	39.8	37.0
6	33	H	1	F	2211	2116	445	23.7	198	166	26.6	176	132	15.7	132	74.1	28.3	36.8
6	33	H	1	F	2752	2642	554	49.2	247	212	38.2	226	172	23.2	158	92.6	41.9	41.6
6	34	H	3	F	2316	2219	378	24.5	217	180	37.5	189	139	23.2	126	69.4	35.7	63.8
6	34	H	3	F	2262	2199	412	31.5	209	182	36.8	158	121	21.9	101	50.1	35.9	66.7
6	35	H	4	F	3216	2136	370	24.4	216	190	48.6	176	134	26.4	130	74.4	37.7	68.7
6	35	H	4	F	2229	2138	356	30.8	232	193	50.4	187	138	20.9	118	67.7	32.9	73.2
6	36	R	4	M	2607	2535	414	46.4	249	207	45.0	217	156	25.4	155	87.3	47.0	57.9
6	36	R	4	M	2962	2870	490	42.8	283	234	49.7	242	175	35.3	147	80.4	44.3	78.5
6	37	R	1	F	2580	2460	449	43.9	236	193	43.5	213	163	21.8	146	88.5	36.7	52.9
6	37	R	1	F	2613	2544	468	26.0	242	201	40.8	222	167	39.9	157	93.8	38.5	63.6
6	38	C	3	F	2819	2707	545	48.3	251	218	45.5	215	156	21.6	161	92.7	53.6	59.7
6	38	C	3	F	2789	2693	476	41.8	245	210	45.4	220	164	42.7	152	82.5	45.1	72.3
6	39	R	3	M	2881	2778	489	38.5	295	250	50.2	250	179	19.5	171	99.7	44.4	74.0
6	39	R	3	M	3003	2927	475	38.1	283	236	52.3	260	183	24.0	181	110	47.5	54.7
6	40	C	2	F	3081	2952	601	37.1	259	223	42.1	232	178	48.1	174	113	32.9	73.8
6	40	C	2	F	2753	2650	544	51.5	263	226	33.8	227	170	35.1	153	88.5	41.4	72.5
6	41	R	1	M	2845	2731	441	42.1	250	205	27.9	240	171	22.7	159	88.5	46.2	46.3
6	41	R	1	M	2592	2525	445	39.2	230	181	26.7	233	168	14.4	161	84.6	40.4	24.6
6	42	C	2	M	3117	3014	575	49.0	284	241	28.5	283	203	42.8	186	108	43.6	66.7

6	42	C	2	M	3072	2970	596	46.2	269	223	44.4	248	178	19.1	160	92.4	37.7	76.0
8	7	C	3	M	4380	4259	943	58	514	450	56	392	294	42	226	131	67	96
8	7	C	3	M	4150	4025	769	50	414	344	64	373	272	62	228	129	64	120
8	8	R	2	F	3230	3112	573	49	282	234	57	274	209	30	179	103	52	77
8	8	R	2	F	3280	3165	638	58	301	239	52	228	161	37	207	117	61	87
8	9	H	2	F	3363	3277	711	50	288	248	43	238	180	34	177	99	67	76
8	9	H	2	F	3344	3184	702	58	318	274	58	270	210	38	188	108	52	124
8	10	C	2	M	5028	4889	1070	72	596	523	61	476	359	60	271	155	88	97
8	10	C	2	M	4130	4007	854	65	417	348	52	373	276	34	261	148	53	91
8	11	R	2	F	3601	3434	549	56	307	252	81	290	223	56	239	158	73	125
8	11	R	2	F	3106	2993	578	36	305	260	62	237	189	59	195	117	52	124
8	12	H	2	M	3325	3197	594	51	317	257	41	293	209	41	199	95	55	80
8	12	H	2	M	3429	3286	617	33	342	283	52	265	193	50	215	132	52	135
8	13	C	2	M	3391	3278	526	49	301	238	78	286	202	43	189	109	57	135
8	13	C	2	M	3003	2920	482	51	337	283	52	237	167	40	176	90	50	110
8	14	H	2	M	3616	3485	589	35	340	264	36	302	216	33	227	127	52	53
8	14	H	2	M	4147	4020	864	61	512	443	66	341	247	45	269	157	65	37
8	15	C	2	F	4351	4209	935	62	422	361	54	443	333	34	267	156	63	41
8	15	C	2	F	3589	3446	688	52	522	276	49	305	232	63	226	139	68	104
8	16	C	2	F	3162	3039	566	57	316	275	77	243	182	64	176	102	62	141
8	16	C	2	F	2974	2877	590	55	284	239	80	227	175	34	168	99	48	101
8	17	R	2	M	4218	4105	784	51	455	388	64	351	256	62	264	153	90	72
8	17	R	2	M	3638	3494	577	50	359	302	43	329	236	36	202	109	48	97
8	18	H	2	M	3855	3722	763	53	462	383	45	304	227	48	230	138	55	96
8	18	H	2	M	3350	3288	537	40	325	273	64	293	221	43	209	120	68	88
8	31	R	2	F	2638	2517	369	42	250	203	54	242	185	49	177	107	50	80
8	31	R	2	F	3010	2914	467	46	291	245	68	272	204	61	211	129	51	105
8	32	H	2	M	3817	3698	766	65	397	331	45	363	266	42	233	128	62	54
8	32	H	2	M	3945	3788	737	54	394	317	47	387	283	35	244	132	64	60
8	33	H	2	F	3782	3640	837	59	342	294	81	300	236	28	235	151	53	114
8	33	H	2	F	4177	4044	1076	76	348	292	54	308	233	92	238	153	76	112
8	34	H	2	F	3606	3450	697	54	363	320	52	302	226	43	248	153	76	119
8	34	H	2	F	3038	2941	581	50	291	259	50	247	189	44	212	133	59	69
8	35	H	2	F	3030	2910	553	60	251	218	41	237	177	43	191	113	46	77
8	35	H	2	F	3827	3685	714	53	367	325	66	272	205	80	240	155	73	135
8	36	R	2	M	3175	3068	449	36	285	221	54	262	169	65	237	149	64	88
8	36	R	2	M	4115	4010	690	72	420	334	57	363	257	75	267	147	55	109
8	37	R	2	F	3744	3606	702	70	361	312	50	325	268	30	229	139	61	122
8	37	R	2	F	3856	3713	777	74	422	369	75	350	271	28	209	127	54	131
8	38	C	2	F	3214	3105	650	61	300	253	55	283	213	48	224	143	66	99
8	38	C	2	F	3785	3670	986	87	360	323	51	251	194	48	215	127	65	109
8	39	R	2	M	4102	3977	670	66	410	346	54	384	286	81	270	163	95	132
8	39	R	2	M	3728	3602	644	68	346	282	63	323	223	57	202	110	70	102
8	40	C	2	F	3488	3346	763	52	346	294	78	281	218	33	192	100	54	90
8	40	C	2	F	3633	3524	803	50	330	297	164	256	194	53	224	143	53	144
8	41	R	2	M	4728	4557	863	94	379	327	47	392	310	96	256	151	68	81
8	41	R	2	M	3939	3795	851	68	432	366	52	367	264	33	207	128	49	69
8	42	C	2	M	4425	4385	954	61	420	365	77	349	262	30	269	166	69	150

8	42	C	2	M	4351	4212	870	73	419	358	62	368	278	46	232	132	65	154	

Pen No	Feed	Sex	Strain	W0	W1	W2	W3	W4	W5	W6	W7	W8	F1	F2	F3	F4	F5	F6	F7	F8	dW1	dW2	dW3	dW4	dW5	dW6	dW7	dW8	FCE1	FCE2	FCE3	FCE4	FCE5	FCE6	FCE7	FCE8
7	3	M	Cobb	46	217	536	1013	1507	2168	2740	3430	3865	197	442	491	811	1326	912	1616	1448	171	319	477	494	661	572	690	435	868	721	971	609	499	627	427	301
8	2	F	Ross 308	44	145	409	817	1212	1881	2258	2638	2931	105	347	405	711	1236	803	1450	1623	102	264	408	395	669	377	380	294	968	761	1006	556	541	469	262	181
9	2	F	Hybro	36	195	484	900	1298	1828	2244	2758	3050	175	371	407	651	1044	471	1226	1100	159	289	416	398	530	417	514	293	908	780	1021	611	507	884	419	266
10	1	M	Cobb	46	233	570	1069	1615	2369	3218	3843	4637	174	430	491	843	1833	888	1580	1517	187	338	499	546	754	849	625	795	1073	786	1016	647	411	956	395	524
11	3	F	Ross 308	43	136	372	754	1206	1803	2288	2743	3143	111	334	395	729	2060	842	1400	1413	93	236	383	452	597	486	454	400	837	707	968	619	290	577	325	283
12	4	M	Hybro	37	170	425	813	1238	1752	2460	2823	3157	205	361	398	688	2073	808	1299	1280	133	255	388	425	514	708	363	335	650	706	976	618	248	876	279	261
13	4	M	Cobb	47	188	455	877	1290	1859	2302	2603	2780	188	414	448	797	2056	672	1085	993	141	267	422	413	569	443	301	177	749	645	941	518	277	659	277	178
14	1	M	Hybro	37	220	555	997	1495	2164	2810	3083	3187	207	407	444	787	1586	795	1091	951	184	334	442	498	669	646	273	104	887	821	997	633	422	813	250	109
15	1	F	Cobb	46	225	564	1021	1441	2143	2772	3278	3643	171	450	477	809	1693	889	1329	1117	179	339	457	420	702	630	506	365	1051	753	958	519	414	708	380	327
16	4	F	Cobb	45	192	450	851	1212	1734	1950	2466	2577	189	391	433	683	1815	714	1029	820	147	258	401	361	522	216	516	111	778	659	926	529	288	302	501	136
17	2	M	Ross 308	42	138	392	803	1255	1907	2628	3317	3680	111	359	397	733	1981	798	1493	1670	96	255	410	453	652	721	689	363	862	710	1032	617	329	904	462	217
18	3	M	Hybro	36	183	458	886	1264	1915	2440	2903	3337	202	373	411	729	1881	794	1244	1315	146	275	428	378	651	525	463	435	724	738	1041	519	346	661	372	331
31	4	F	Ross 308	42	123	342	684	1072	1746	2235	2658	2889	105	347	372	727	2107	836	1309	1077	82	219	342	388	674	489	423	231	778	631	919	533	320	585	323	214
32	2	M	Hybro	37	203	500	924	1384	2021	2705	3203	3697	188	393	424	749	1929	815	1345	1280	167	297	424	460	637	684	498	494	888	755	1001	614	330	839	370	386
33	1	F	Hybro	37	208	498	937	1394	1883	2510	3125	3468	156	387	389	670	1293	691	1338	1190	171	291	438	457	489	628	615	343	1095	751	1126	683	378	908	460	288
34	3	F	Hybro	37	200	466	840	1280	1819	2335	2900	3249	177	366	379	677	1593	702	1251	1205	163	266	374	440	539	516	565	349	921	726	988	650	339	734	452	289
35	4	F	Hybro	36	173	413	739	1016	1578	2185	2660	2893	204	375	366	611	1746	689	1214	1060	137	239	326	277	562	608	475	233	670	638	891	454	322	882	391	219
36	4	M	Ross 308	42	128	334	674	1065	1781	2330	2738	3211	136	422	356	723	2177	860	1560	1491	86	206	340	391	716	549	408	474	630	489	956	540	329	639	261	318
37	1	F	Ross 308	42	152	427	836	1305	1938	2575	3135	3478	97	356	540	596	1638	886	1596	1398	110	275	410	469	633	638	560	343	1132	771	759	787	386	720	351	245
38	3	F	Cobb	46	209	514	962	1407	2061	2595	3135	3495	176	411	451	790	1971	811	1436	1166	163	305	448	445	654	534	540	360	930	742	993	564	332	659	376	309
39	3	M	Ross 308	42	136	363	779	1248	2015	2630	3457	3637	107	380	402	779	2325	949	1494	1110	94	227	417	469	767	615	827	180	876	597	1038	601	330	648	553	162
40	2	F	Cobb	46	225	545	1036	1475	1998	2570	2948	3430	176	443	488	780	1925	679	1171	1077	179	320	491	439	523	572	378	483	1017	724	1007	562	272	842	322	448
41	1	M	Ross 308	42	148	409	851	1304	2028	2440	3388	3880	99	346	421	1074	1707	2249	1616	893	106	261	441	453	724	412	948	492	1072	754	1049	422	424	254	427	551
42	2	M	Cobb	46	222	563	1098	1606	2436	3100	3790	4290	184	442	518	861	2184	904	1543	1423	176	341	536	508	830	664	690	500	955	770	1034	590	380	735	447	351

Strain	Feed	Sex	B Weight	Breast	ln BW	ln Breast
H	*	F	41.02	0.5	3.71406	-0.67334
H	*	F	40.77	0.9	3.707947	-0.10536
H	*	F	36.94	0.3	3.609295	-1.38629
H	*	F	42.37	0.5	3.746441	-0.65393
H	*	F	41.72	0.6	3.730981	-0.52763
H	*	F	39.39	0.9	3.673512	-0.16252
H	*	F	33.91	0.4	3.52371	-0.84397
H	*	M	33.61	0.6	3.514824	-0.4943
H	*	M	38.99	0.5	3.663305	-0.61619
H	*	M	31.08	0.4	3.436565	-1.04982
H	*	M	33.82	0.5	3.521052	-0.65393
H	*	M	36.97	0.6	3.610107	-0.47804
H	*	M	37.60	0.6	3.627004	-0.44629
H	*	M	37.20	0.5	3.616309	-0.67334
H	*	M	36.56	0.6	3.598955	-0.56212
C	*	F	43.43	0.8	3.77115	-0.19845
C	*	F	48.13	0.7	3.873906	-0.31471
C	*	F	47.51	1.0	3.86094	-0.01005
C	*	F	51.51	1.0	3.941776	-0.0202
C	*	F	44.52	0.8	3.795939	-0.27444
C	*	F	43.39	0.5	3.770229	-0.61619
C	*	F	43.67	0.8	3.776661	-0.28768
C	*	F	45.30	0.9	3.813307	-0.06188
C	*	F	47.24	0.7	3.855241	-0.40048
C	*	M	43.30	1.0	3.768153	0
C	*	M	48.86	0.8	3.888959	-0.18633
C	*	M	39.39	0.3	3.673512	-1.27297
C	*	M	40.02	0.5	3.689379	-0.69315
C	*	M	41.23	0.9	3.719166	-0.09431
C	*	M	49.21	0.8	3.896097	-0.18633
C	*	M	47.30	0.8	3.85651	-0.18633
C	*	M	41.76	0.9	3.731939	-0.10536
R	*	F	39.15	0.7	3.6674	-0.41552
R	*	F	41.76	0.4	3.731939	-0.96758
R	*	F	38.52	0.4	3.651178	-0.8916
R	*	F	40.82	0.6	3.709172	-0.57982
R	*	F	48.28	0.6	3.877017	-0.44629
R	*	F	37.90	0.6	3.634951	-0.52763
R	*	M	41.64	0.4	3.729061	-0.96758

Strain	Feed	Sex	B Weight	Breast	ln BW	ln Breast
C	3	M	616	81.6	6.423247	4.401216
C	3	M	620	69.2	6.429719	4.237001
R	2	F	397	50.8	5.983936	3.92829
R	2	F	421	51.9	6.042633	3.949126
H	2	F	477	68.6	6.167516	4.227855
H	2	F	475	63.3	6.163315	4.148043
C	1	M	541	73.0	6.293419	4.290322
C	1	M	517	58.9	6.248043	4.074992
R	3	F	363	43.5	5.894403	3.772991
R	3	F	308	30.4	5.7301	3.415758
H	4	M	358	38.5	5.880533	3.650398
H	4	M	398	47.8	5.986452	3.866398
C	4	M	419	42.2	6.037871	3.741946
C	4	M	475	50.8	6.163315	3.927109
H	1	M	523	65.4	6.259581	4.180369
H	1	M	481	56.8	6.175867	4.04024
C	1	F	481	69.1	6.175867	4.235989
C	1	F	502	65.2	6.2186	4.177153
C	4	F	373	43.3	5.921578	3.766997
C	4	F	378	45.0	5.934894	3.807551
R	2	M	400	40.6	5.991465	3.704507
R	2	M	380	47.7	5.940171	3.864092
H	3	M	502	63.6	6.2186	4.152142
H	3	M	438	52.2	6.082219	3.955848
R	4	F	321	28.4	5.771441	3.345685
R	4	F	300	26.9	5.703782	3.291383
H	2	M	479	62.8	6.171701	4.139477
H	2	M	475	62.6	6.163315	4.137404
H	1	F	486	54.5	6.186209	3.997834
H	1	F	400	45.6	5.991465	3.81903
H	3	F	393	49.0	5.97381	3.891004
H	3	F	409	45.8	6.013715	3.824939
H	4	F	427	46.6	6.056784	3.841386
H	4	F	388	40.8	5.961005	3.708437
R	4	M	403	42.1	5.998937	3.740523
R	4	M	331	31.3	5.802118	3.444257
R	1	F	394	51.3	5.976351	3.936911
R	1	F	426	59.1	6.054439	4.078554
C	3	F	415	51.3	6.028279	3.937886

R	*	M	41.17	0.5	3.71771	-0.69315
R	*	M	40.81	0.7	3.708927	-0.43078
R	*	M	39.22	0.5	3.669187	-0.75502
R	*	M	44.58	0.9	3.797285	-0.16252
R	*	M	49.26	0.7	3.897112	-0.38566
R	*	M	45.12	0.6	3.809326	-0.46204
R	*	M	46.09	0.9	3.830596	-0.07257
C	3	M	616	81.6	6.423247	4.401216
C	3	M	620	69.2	6.429719	4.237001
R	2	F	397	50.8	5.983936	3.92829
R	2	F	421	51.9	6.042633	3.949126
H	2	F	477	68.6	6.167516	4.227855
H	2	F	475	63.3	6.163315	4.148043
C	1	M	541	73.0	6.293419	4.290322
C	1	M	517	58.9	6.248043	4.074992
R	3	F	363	43.5	5.894403	3.772991
R	3	F	308	30.4	5.7301	3.415758
H	4	M	358	38.5	5.880533	3.650398
H	4	M	398	47.8	5.986452	3.866398
C	4	M	419	42.2	6.037871	3.741946
C	4	M	475	50.8	6.163315	3.927109
H	1	M	523	65.4	6.259581	4.180369
H	1	M	481	56.8	6.175867	4.04024
C	1	F	481	69.1	6.175867	4.235989
C	1	F	502	65.2	6.2186	4.177153
C	4	F	373	43.3	5.921578	3.766997
C	4	F	378	45.0	5.934894	3.807551
R	2	M	400	40.6	5.991465	3.704507
R	2	M	380	47.7	5.940171	3.864092
H	3	M	502	63.6	6.2186	4.152142
H	3	M	438	52.2	6.082219	3.955848
R	4	F	321	28.4	5.771441	3.345685
R	4	F	300	26.9	5.703782	3.291383
H	2	M	479	62.8	6.171701	4.139477
H	2	M	475	62.6	6.163315	4.137404
H	1	F	486	54.5	6.186209	3.997834
H	1	F	400	45.6	5.991465	3.81903
H	3	F	393	49.0	5.97381	3.891004
H	3	F	409	45.8	6.013715	3.824939
H	4	F	427	46.6	6.056784	3.841386

C	3	F	417	51.1	6.033086	3.933197
R	3	M	391	40.4	5.968708	3.698335
R	3	M	376	39.0	5.929589	3.663049
C	2	F	513	76.6	6.240276	4.338597
C	2	F	339	42.2	5.826	3.74242
R	1	M	412	42.7	6.021023	3.753965
R	1	M	405	52.3	6.003887	3.956231
C	2	M	600	80.2	6.39693	4.384898
C	2	M	571	85.7	6.347389	4.451086
C	3	M	1574	261	7.361375	5.56452
C	3	M	1641	261	7.403061	5.56452
R	2	F	977	138	6.884487	4.927254
R	2	F	1226	182	7.111512	5.204007
H	2	F	1092	161	6.995766	5.081404
H	2	F	923	135	6.827629	4.905275
C	1	M	1880	351	7.539027	5.860786
C	1	M	1711	259	7.444833	5.556828
R	3	F	1100	139	7.003065	4.934474
R	3	F	1200	172	7.090077	5.147494
H	4	M	1335	223	7.196687	5.407172
H	4	M	1376	216	7.226936	5.375278
C	4	M	1696	254	7.436028	5.537334
C	4	M	1648	253	7.407318	5.533389
H	1	M	1876	342	7.536897	5.834811
H	1	M	1715	306	7.447168	5.723585
C	1	F	1171	191	7.065613	5.252273
C	1	F	1127	209	7.027315	5.342334
C	4	F	909	105	6.812345	4.65396
C	4	F	1000	124	6.907755	4.820282
R	2	M	1425	186	7.261927	5.225747
R	2	M	1483	220	7.301822	5.393628
H	3	M	1488	203	7.305188	5.313206
H	3	M	1467	232	7.290975	5.446737
R	4	F	1256	160	7.135687	5.075174
R	4	F	1099	136	7.002156	4.912655
H	2	M	1600	264	7.377759	5.575949
H	2	M	1550	282	7.34601	5.641907
H	1	F	1481	244	7.300473	5.497168
H	1	F	1082	167	6.986566	5.117994
H	3	F	1275	193	7.150701	5.26269

H	4	F	388	40.8	5.961005	3.708437
R	4	M	403	42.1	5.998937	3.740523
R	4	M	331	31.3	5.802118	3.444257
R	1	F	394	51.3	5.976351	3.936911
R	1	F	426	59.1	6.054439	4.078554
C	3	F	415	51.3	6.028279	3.937886
C	3	F	417	51.1	6.033086	3.933197
R	3	M	391	40.4	5.968708	3.698335
R	3	M	376	39.0	5.929589	3.663049
C	2	F	513	76.6	6.240276	4.338597
C	2	F	339	42.2	5.826	3.74242
R	1	M	412	42.7	6.021023	3.753965
R	1	M	405	52.3	6.003887	3.956231
C	2	M	600	80.2	6.39693	4.384898
C	2	M	571	85.7	6.347389	4.451086
C	3	M	1574	261	7.361375	5.56452
C	3	M	1641	261	7.403061	5.56452
R	2	F	977	138	6.884487	4.927254
R	2	F	1226	182	7.111512	5.204007
H	2	F	1092	161	6.995766	5.081404
H	2	F	923	135	6.827629	4.905275
C	1	M	1880	351	7.539027	5.860786
C	1	M	1711	259	7.444833	5.556828
R	3	F	1100	139	7.003065	4.934474
R	3	F	1200	172	7.090077	5.147494
H	4	M	1335	223	7.196687	5.407172
H	4	M	1376	216	7.226936	5.375278
C	4	M	1696	254	7.436028	5.537334
C	4	M	1648	253	7.407318	5.533389
H	1	M	1876	342	7.536897	5.834811
H	1	M	1715	306	7.447168	5.723585
C	1	F	1171	191	7.065613	5.252273
C	1	F	1127	209	7.027315	5.342334
C	4	F	909	105	6.812345	4.65396
C	4	F	1000	124	6.907755	4.820282
R	2	M	1425	186	7.261927	5.225747
R	2	M	1483	220	7.301822	5.393628
H	3	M	1488	203	7.305188	5.313206
H	3	M	1467	232	7.290975	5.446737
R	4	F	1256	160	7.135687	5.075174
H	3	F	1258	185	7.137278	5.220356
H	4	F	972	142	6.879356	4.955827
H	4	F	1174	167	7.068172	5.117994
R	4	M	1423	182	7.260523	5.204007
R	4	M	1387	172	7.234898	5.147494
R	1	F	1302	206	7.171657	5.327876
R	1	F	1193	157	7.084226	5.056246
C	3	F	1172	171	7.066467	5.141664
C	3	F	1364	242	7.218177	5.488938
R	3	M	1400	188	7.244228	5.236442
R	3	M	1440	216	7.272398	5.375278
C	2	F	1169	189	7.063904	5.241747
C	2	F	1427	229	7.26333	5.433722
R	1	M	1523	175	7.328437	5.164786
R	1	M	1480	198	7.299797	5.288267
C	2	M	1887	352	7.542744	5.863631
C	2	M	1904	331	7.551712	5.802118
C	3	M	2914	605	7.977282	6.405228
C	3	M	2640	558	7.878534	6.324359
R	2	F	2619	456	7.870548	6.122493
R	2	F	2317	398	7.748029	5.986452
H	2	F	2408	447	7.786552	6.102559
H	2	F	2345	479	7.760041	6.171137
C	1	M	3061	569	8.026497	6.34388
C	1	M	3327	621	8.109826	6.431331
R	3	F	2680	456	7.893572	6.122493
R	3	F	2558	432	7.846981	6.068426
H	4	M	2864	450	7.959975	6.109248
H	4	M	3002	504	8.007034	6.222576
C	4	M	2592	439	7.860185	6.084499
C	4	M	2472	433	7.812783	6.070738
H	1	M	2968	570	7.995644	6.345636
H	1	M	3475	759	8.15335	6.632002
C	1	F	2802	601	7.938089	6.398595
C	1	F	3024	619	8.014336	6.428105
C	4	F	2199	355	7.695758	5.872118
C	4	F	2483	457	7.817223	6.124683
R	2	M	2671	442	7.890208	6.09131
R	2	M	2769	387	7.926242	5.958425
H	3	M	2754	491	7.92081	6.196444

R	4	F	1099	136	7.002156	4.912655
H	2	M	1600	264	7.377759	5.575949
H	2	M	1550	282	7.34601	5.641907
H	1	F	1481	244	7.300473	5.497168
H	1	F	1082	167	6.986566	5.117994
H	3	F	1275	193	7.150701	5.26269
H	3	F	1258	185	7.137278	5.220356
H	4	F	972	142	6.879356	4.955827
H	4	F	1174	167	7.068172	5.117994
R	4	M	1423	182	7.260523	5.204007
R	4	M	1387	172	7.234898	5.147494
R	1	F	1302	206	7.171657	5.327876
R	1	F	1193	157	7.084226	5.056246
C	3	F	1172	171	7.066467	5.141664
C	3	F	1364	242	7.218177	5.488938
R	3	M	1400	188	7.244228	5.236442
R	3	M	1440	216	7.272398	5.375278
C	2	F	1169	189	7.063904	5.241747
C	2	F	1427	229	7.26333	5.433722
R	1	M	1523	175	7.328437	5.164786
R	1	M	1480	198	7.299797	5.288267
C	2	M	1887	352	7.542744	5.863631
C	2	M	1904	331	7.551712	5.802118
C	3	M	2914	605	7.977282	6.405228
C	3	M	2640	558	7.878534	6.324359
R	2	F	2619	456	7.870548	6.122493
R	2	F	2317	398	7.748029	5.986452
H	2	F	2408	447	7.786552	6.102559
H	2	F	2345	479	7.760041	6.171137
C	1	M	3061	569	8.026497	6.34388
C	1	M	3327	621	8.109826	6.431331
R	3	F	2680	456	7.893572	6.122493
R	3	F	2558	432	7.846981	6.068426
H	4	M	2864	450	7.959975	6.109248
H	4	M	3002	504	8.007034	6.222576
C	4	M	2592	439	7.860185	6.084499
C	4	M	2472	433	7.812783	6.070738
H	1	M	2968	570	7.995644	6.345636
H	1	M	3475	759	8.15335	6.632002
C	1	F	2802	601	7.938089	6.398595
H	3	M	2672	443	7.890583	6.09357
R	4	F	2112	328	7.655391	5.793014
R	4	F	2256	271	7.721349	5.602119
H	2	M	3003	523	8.007367	6.259581
H	2	M	2943	557	7.987185	6.322565
H	1	F	2211	445	7.7012	6.098074
H	1	F	2752	554	7.920083	6.317165
H	3	F	2316	378	7.747597	5.934894
H	3	F	2262	412	7.724005	6.021023
H	4	F	3216	370	8.075894	5.913503
H	4	F	2229	356	7.709308	5.874931
R	4	M	2607	414	7.865955	6.025866
R	4	M	2962	490	7.99362	6.194405
R	1	F	2580	449	7.855545	6.107023
R	1	F	2613	468	7.868254	6.148468
C	3	F	2819	545	7.944137	6.300786
C	3	F	2789	476	7.933438	6.165418
R	3	M	2881	489	7.965893	6.192362
R	3	M	3003	475	8.007367	6.163315
C	2	F	3081	601	8.033009	6.398595
C	2	F	2753	544	7.920447	6.298949
R	1	M	2845	441	7.953318	6.089045
R	1	M	2592	445	7.860185	6.098074
C	2	M	3117	575	8.044626	6.35437
C	2	M	3072	596	8.030084	6.390241
C	3	M	4380	943	8.384804	6.849066
C	3	M	4150	769	8.330864	6.645091
R	2	F	3230	573	8.080237	6.350886
R	2	F	3280	638	8.095599	6.458338
H	2	F	3363	711	8.120589	6.566672
H	2	F	3344	702	8.114923	6.553933
C	2	M	5028	1070	8.522778	6.975414
C	2	M	4130	854	8.326033	6.749931
R	2	F	3601	549	8.188967	6.308972
R	2	F	3106	578	8.041091	6.359574
H	2	M	3325	594	8.109225	6.386879
H	2	M	3429	617	8.140024	6.424869
C	2	M	3391	526	8.12888	6.265301
C	2	M	3003	482	8.007367	6.177944
H	2	M	3616	589	8.193124	6.378426

C	1	F	3024	619	8.014336	6.428105
C	4	F	2199	355	7.695758	5.872118
C	4	F	2483	457	7.817223	6.124683
R	2	M	2671	442	7.890208	6.09131
R	2	M	2769	387	7.926242	5.958425
H	3	M	2754	491	7.92081	6.196444
H	3	M	2672	443	7.890583	6.09357
R	4	F	2112	328	7.655391	5.793014
R	4	F	2256	271	7.721349	5.602119
H	2	M	3003	523	8.007367	6.259581
H	2	M	2943	557	7.987185	6.322565
H	1	F	2211	445	7.7012	6.098074
H	1	F	2752	554	7.920083	6.317165
H	3	F	2316	378	7.747597	5.934894
H	3	F	2262	412	7.724005	6.021023
H	4	F	3216	370	8.075894	5.913503
H	4	F	2229	356	7.709308	5.874931
R	4	M	2607	414	7.865955	6.025866
R	4	M	2962	490	7.99362	6.194405
R	1	F	2580	449	7.855545	6.107023
R	1	F	2613	468	7.868254	6.148468
C	3	F	2819	545	7.944137	6.300786
C	3	F	2789	476	7.933438	6.165418
R	3	M	2881	489	7.965893	6.192362
R	3	M	3003	475	8.007367	6.163315
C	2	F	3081	601	8.033009	6.398595
C	2	F	2753	544	7.920447	6.298949
R	1	M	2845	441	7.953318	6.089045
R	1	M	2592	445	7.860185	6.098074
C	2	M	3117	575	8.044626	6.35437
C	2	M	3072	596	8.030084	6.390241
C	3	M	4380	943	8.384804	6.849066
C	3	M	4150	769	8.330864	6.645091
R	2	F	3230	573	8.080237	6.350886
R	2	F	3280	638	8.095599	6.458338
H	2	F	3363	711	8.120589	6.566672
H	2	F	3344	702	8.114923	6.553933
C	2	M	5028	1070	8.522778	6.975414
C	2	M	4130	854	8.326033	6.749931
R	2	F	3601	549	8.188967	6.308972

H	2	M	4147	864	8.33014	6.761376
C	2	F	4351	935	8.378161	6.840547
C	2	F	3589	688	8.185629	6.533789
C	2	F	3162	566	8.05896	6.338594
C	2	F	2974	590	7.997663	6.380123
R	2	M	4218	784	8.347116	6.664409
R	2	M	3638	577	8.199189	6.357842
H	2	M	3855	763	8.257126	6.637258
H	2	M	3350	537	8.116716	6.285998
R	2	F	2638	369	7.877776	5.910797
R	2	F	3010	467	8.009695	6.146329
H	2	M	3817	766	8.24722	6.641182
H	2	M	3945	737	8.280204	6.602588
H	2	F	3782	837	8.238008	6.729824
H	2	F	4177	1076	8.337349	6.981006
H	2	F	3606	697	8.190354	6.546785
H	2	F	3038	581	8.018955	6.364751
H	2	F	3030	553	8.016318	6.315358
H	2	F	3827	714	8.249836	6.570883
R	2	M	3175	449	8.063063	6.107023
R	2	M	4115	690	8.322394	6.536474
R	2	F	3744	702	8.22791	6.553933
R	2	F	3856	777	8.257386	6.65544
C	2	F	3214	650	8.075272	6.476972
C	2	F	3785	986	8.238801	6.893656
R	2	M	4102	670	8.31923	6.507278
R	2	M	3728	644	8.223627	6.467699
C	2	F	3488	763	8.157084	6.637258
C	2	F	3633	803	8.197814	6.688355
R	2	M	4728	863	8.461258	6.760415
R	2	M	3939	851	8.278682	6.746412
C	2	M	4425	954	8.395026	6.860664
C	2	M	4351	870	8.378161	6.768493

R	2	F	3106	578	8.041091	6.359574
H	2	M	3325	594	8.109225	6.386879
H	2	M	3429	617	8.140024	6.424869
C	2	M	3391	526	8.12888	6.265301
C	2	M	3003	482	8.007367	6.177944
H	2	M	3616	589	8.193124	6.378426
H	2	M	4147	864	8.33014	6.761376
C	2	F	4351	935	8.378161	6.840547
C	2	F	3589	688	8.185629	6.533789
C	2	F	3162	566	8.05896	6.338594
C	2	F	2974	590	7.997663	6.380123
R	2	M	4218	784	8.347116	6.664409
R	2	M	3638	577	8.199189	6.357842
H	2	M	3855	763	8.257126	6.637258
H	2	M	3350	537	8.116716	6.285998
R	2	F	2638	369	7.877776	5.910797
R	2	F	3010	467	8.009695	6.146329
H	2	M	3817	766	8.24722	6.641182
H	2	M	3945	737	8.280204	6.602588
H	2	F	3782	837	8.238008	6.729824
H	2	F	4177	1076	8.337349	6.981006
H	2	F	3606	697	8.190354	6.546785
H	2	F	3038	581	8.018955	6.364751
H	2	F	3030	553	8.016318	6.315358
H	2	F	3827	714	8.249836	6.570883
R	2	M	3175	449	8.063063	6.107023
R	2	M	4115	690	8.322394	6.536474
R	2	F	3744	702	8.22791	6.553933
R	2	F	3856	777	8.257386	6.65544
C	2	F	3214	650	8.075272	6.476972
C	2	F	3785	986	8.238801	6.893656
R	2	M	4102	670	8.31923	6.507278
R	2	M	3728	644	8.223627	6.467699
C	2	F	3488	763	8.157084	6.637258
C	2	F	3633	803	8.197814	6.688355
R	2	M	4728	863	8.461258	6.760415
R	2	M	3939	851	8.278682	6.746412
C	2	M	4425	954	8.395026	6.860664
C	2	M	4351	870	8.378161	6.768493

July Trial Results

Age	Pen	Feed	Sex	Strain	DCP	water								protein				
						br meat	br skin	th meat	th skin	dr meat	dr skin	wg meat	wg skin	br meat	br skin	th meat	th skin	dr meat
14	7	3	M	C		73.51	39.10	64.99	35.52	73.45	42.22	72.62	53.06	91.40	12.95	39.74	13.42	76.26
14	8	2	F	R		73.26	50.23	65.93	44.30	73.61	56.75	69.63	61.36	90.79	22.46	50.49	20.98	77.47
14	9	2	F	H		74.67	49.08	67.01	41.31	75.21	59.35	72.66	55.78	90.44	24.34	51.10	18.43	72.68
14	10	1	M	C		75.04	50.76	69.70	45.77	76.40	55.02	73.78	57.80	89.28	18.91	63.07	18.24	78.05
14	11	3	F	R		75.35	40.11	66.34	37.29	75.86	44.35	72.91	56.43	92.54	13.39	46.94	15.18	74.56
14	12	4	M	H		74.26	45.70	65.33	41.84	74.65	56.27	72.14	60.32	87.47	24.79	57.01	17.10	72.34
14	13	4	M	C		72.77	41.27	64.45	38.63	75.71	48.89	69.99	54.20	85.29	17.22	55.72	15.08	73.21
14	14	1	M	H		73.59	46.42	67.29	42.75	74.41	52.31	73.44	62.77	90.79	19.68	51.05	17.90	70.88
14	15	1	F	C		74.11	47.12	67.36	38.05	75.43	49.62	72.98	56.91	81.29	24.33	73.36	15.44	84.48
14	16	4	F	C		73.57	36.76	70.09	48.13	66.91	37.79	73.18	56.31	82.55	11.06	59.62	21.74	55.89
14	17	2	M	R		74.15	46.09	67.51	44.11	75.78	53.81	73.49	61.16	91.49	22.40	56.26	15.93	81.77
14	18	3	M	H		74.97	44.72	64.89	37.08	75.33	45.43	72.82	57.85	93.36	18.75	56.24	12.75	72.93
14	31	4	F	R		74.11	36.92	63.40	31.88	74.43	43.64	71.42	49.70	83.07	12.19	46.31	13.65	67.60
14	32	2	M	H		75.10	47.83	67.55	46.34	75.34	53.79	74.05	63.87	92.91	19.63	47.11	21.81	73.48
14	33	1	F	H		75.23	48.87	68.16	44.06	75.54	58.17	72.92	59.57	89.88	22.43	53.92	19.84	64.42
14	34	3	F	H		74.60	48.56	64.96	38.68	75.14	62.24	73.02	58.81	84.48	21.09	40.55	16.26	69.87
14	35	4	F	H		73.82	39.92	64.64	35.02	74.13	45.04	70.48	53.09	85.88	9.87	44.11	13.56	72.24
14	36	4	M	R		75.00	41.01	66.86	35.21	73.80	45.72	70.72	50.98	88.24	24.33	50.55	14.29	71.56
14	37	1	F	R		75.62	49.81	69.50	44.17	75.09	56.36	73.22	59.89	86.85	33.63	66.55	21.66	84.32
14	38	3	F	C		73.32	37.20	67.20	40.67	75.95	45.51	72.49	56.92	82.05	13.03	43.08	14.88	80.87
14	39	3	M	R		74.79	44.34	68.73	39.14	75.45	51.11	73.28	59.38	92.77	14.96	59.34	18.07	77.30
14	40	2	F	C		73.90	42.85	68.10	40.74	75.07	47.92	72.74	56.64	86.13	14.94	57.05	17.46	78.77
14	41	1	M	R		75.35	48.08	67.31	39.45	75.54	56.41	74.04	58.14	88.22	24.79	50.30	22.55	74.21
14	42	2	M	C		73.72	44.59	68.70	38.46	75.48	45.21	72.41	57.81	89.06	23.33	69.32	18.00	71.11
28	7	3	M	C		71.09	43.89	61.77	35.71	72.42	46.86	68.37	57.97	82.36	24.08	45.03	12.32	62.55
28	8	2	F	R		70.85	49.60	62.11	40.75	75.92	53.39	70.31	54.44	86.05	24.12	47.60	12.86	75.28
28	9	2	F	H		72.31	45.19	69.64	38.32	75.05	45.51	71.47	58.91	86.03	16.00	52.43	12.94	70.99
28	10	1	M	C		72.13	41.43	67.42	35.88	74.62	45.31	71.61	52.85	83.66	18.87	56.87	15.40	72.14
28	11	3	F	R		70.84	38.75	60.27	30.31	74.44	42.81	68.37	49.55	81.29	18.17	47.74	12.24	74.56
28	12	4	M	H		72.29	39.47	63.94	34.80	71.88	41.68	71.55	54.52	85.69	15.81	47.11	13.01	62.61
28	13	4	M	C		71.16	40.15	62.50	30.38	72.89	44.96	69.76	63.39	80.58	15.40	45.58	13.37	67.62
28	14	1	M	H		72.81	46.78	68.36	40.68	73.30	51.59	69.72	58.63	86.47	28.63	59.37	16.90	70.07
28	15	1	F	C		70.99	42.09	67.83	35.35	74.66	44.71	71.02	53.50	88.31	26.98	58.76		79.14
28	16	4	F	C		70.66	35.58	63.20	33.25	71.75	41.87	72.41	52.10	80.76	18.33	48.66	15.79	70.93
28	17	2	M	R		71.79	44.41	63.82	40.20	70.78	45.68	71.56	57.61	84.46	14.86	49.93	21.53	65.74
28	18	3	M	H		72.46	43.08	64.72	37.91	71.56	46.95	68.78	56.98	82.74	31.19	50.76	13.40	64.26
28	31	4	F	R		71.47	33.08	61.33	31.97	70.02	34.95	66.36	31.47	79.88	18.26	45.63	9.88	67.02
28	32	2	M	H		72.99	46.04	66.89	41.06	73.06	52.18	70.87	59.72	85.96	23.83	50.46	17.06	71.31
28	33	1	F	H		72.28	42.41	67.86	38.16	75.08	48.33	70.91	56.16	89.88	22.43	53.92	19.84	64.42
28	34	3	F	H		71.41	36.52	62.33	31.51	70.80	40.44	69.75	48.99	83.29	23.22	46.44	16.91	64.52
28	35	4	F	H		71.74	39.09	58.73	34.26	68.88	41.40	68.11	55.84	80.99	16.85	40.28	12.46	63.10
28	36	4	M	R		70.23	39.54	64.64	32.22	70.64	40.69	67.58	53.74	83.75	18.56	53.99	12.10	63.93
28	37	1	F	R		72.07	43.84	67.27	36.84	72.54	41.74	70.45	56.13	89.23	24.29	48.42	17.27	71.08
28	38	3	F	C		70.67	34.37	66.69	29.86	71.69	37.00	70.31	47.01	84.62	18.16	48.88	9.33	71.12
28	39	3	M	R		70.62	44.24	63.52	38.92	70.91	47.07	70.47	57.89	82.81	20.22	49.90	15.10	64.87
28	40	2	F	C		70.20	41.56	62.54	33.26	71.12	40.39	68.32	51.92	82.65	15.91	50.63	15.78	74.09
28	41	1	M	R		74.09	43.29	68.27	36.37	73.98	49.78	70.48	60.61	88.69	27.80	49.39	21.59	77.51
28	42	2	M	C		71.11	44.98	67.28	33.95	68.34	44.07	70.99	52.61	84.71	24.78	72.39	16.63	52.44
42	7	3	M	C		71.91	38.17	63.86	29.58	71.13	41.50	69.52	46.21	81.73	18.31	52.97	14.49	62.24
42	8	2	F	R		70.40	37.56	28.95	72.20	63.05	38.36	69.24	45.10	82.30	18.50	49.27	10.73	70.78

42	9	2	F	H	70.56	36.46	64.50	30.58	69.30	37.11	66.49	44.45		83.85	13.50	51.76	10.94	65.49
42	10	1	M	C	72.04	41.91	67.40	36.06	72.55	44.97	69.39	48.57		86.05	17.21	53.38	18.74	71.83
42	11	3	F	R	68.89	33.12	59.96	26.27	71.48	36.21	67.69	40.05		74.10	9.56	45.30	8.70	70.47
42	12	4	M	H	71.60	41.00	63.01	32.56	72.69	41.22	69.93	48.10		83.02	25.79	47.80	13.60	73.84
42	13	4	M	C	69.50	31.84	61.27	26.27	71.78	35.15	70.48	43.01		80.86	12.70	45.56	11.92	65.90
42	14	1	M	H	71.52	44.23	67.34	38.33	74.14	47.35	70.19	52.84		80.75	28.71	56.63	14.19	75.60
42	15	1	F	C	70.20	31.38	64.09	21.64	71.93	32.73	66.69	40.10		83.47	15.32	52.94	7.53	72.12
42	16	4	F	C	69.48	27.58	63.25	19.81	71.05	28.79	65.53	39.12		81.95	9.23	53.34	8.68	69.33
42	17	2	M	R	71.87	39.44	65.02	31.33	70.82	38.77	70.36	46.42		85.66	16.99	49.98	15.28	66.44
42	18	3	M	H	71.04	38.40	65.60	28.07	73.37	40.86	71.19	48.33		84.08	17.24	52.96	11.49	72.70
42	31	4	F	R	70.46	37.03	61.74	28.37	70.75	36.55	67.81	43.74		80.77	23.76	51.38	10.50	67.37
42	32	2	M	H	71.95	43.05	67.40	37.22	72.22	42.20	69.47	51.77		82.48	20.96	52.66	15.61	66.94
42	33	1	F	H	71.74	41.22	65.61	32.35	71.35	35.14	68.74	46.10		85.60	27.10	51.25		83.46
42	34	3	F	H	70.28	33.94	61.97	25.95	72.51	35.76	69.97	46.95		84.17	15.64	45.60	13.12	72.53
42	35	4	F	H	70.94	35.35	62.37	26.91	69.97	35.85	68.18	45.50		83.50	17.93	46.97	8.83	63.57
42	36	4	M	R	72.19	37.82	62.93	28.10	70.47	36.48	69.82	45.67		83.54	14.56	45.95	10.72	68.61
42	37	1	F	R	69.84	33.40	62.51	27.50	71.38	35.20	67.38	43.43		82.00	17.57		9.18	67.63
42	38	3	F	C	72.24	35.94	67.15	30.69	73.23	35.46	69.55	46.85		84.92	17.14	57.92	11.60	74.62
42	39	3	M	R	70.45	40.65	61.09	31.97	70.96	46.96	67.99	49.48		82.75	14.92	46.05		68.19
42	40	2	F	C	71.17	36.00	64.21	25.81	72.25	29.24	67.42	46.36		85.76	15.47	51.98	9.41	70.41
42	41	1	M	R	72.10	48.68	65.42	42.53	70.41	48.85	68.69	56.39		85.62	23.99	51.83	20.86	66.30
42	42	2	M	C	71.32	43.47	68.02	34.77	73.66	44.88	69.62	52.05		86.88	25.25	52.40	16.52	71.91
56	7	3	M	C	71.23	44.26	66.67	29.36	70.86	43.08	70.68	51.13		86.00	19.44	55.11	13.71	67.78
56	8	2	F	R	69.99	33.74	60.95	25.70	68.05	36.00	69.39	40.27		86.27	13.66	52.57	8.29	64.72
56	9	2	F	H	70.97	37.87	64.42	25.31	70.96	38.05	71.01	39.79		86.89	15.37	55.41	10.19	72.20
56	10	1	M	C	70.56	38.15	68.13	30.59	72.05	43.37	70.70	48.31		86.23	18.50	58.86	13.42	73.49
56	11	3	F	R	70.18	32.42	64.91	22.62	71.48	68.93	32.18	68.82	40.00	84.44	15.28	53.48	7.25	70.45
56	12	4	M	H	70.97	38.08	63.51	28.49	70.77	34.61	70.14	43.83		84.85	23.65	48.54	10.21	67.40
56	13	4	M	C	70.10	36.15	60.77	23.56	68.14	37.79	70.37	45.26		84.88	10.80	45.63	9.75	60.68
56	14	1	M	H	70.88	41.78	66.98	36.93	69.16	46.63	72.17	49.88		80.37	23.40	60.50	18.94	57.75
56	15	1	F	C	70.72	39.32	67.19	29.53		35.55	95.42	43.53		81.23	30.45	59.35	9.20	63.50
56	16	4	F	C	69.55	28.22	61.92	22.29	63.49	27.19	66.39	37.70		81.35	11.56	47.21	8.53	57.26
56	17	2	M	R	69.78	42.82	64.75	30.56	70.36	39.19	71.88	49.93		87.48	30.04	53.61	17.91	74.47
56	18	3	M	H	71.00	42.29	65.30	35.88	70.71	39.67	70.10	48.35		85.70	18.06	51.91	12.52	66.27
56	31	4	F	R	71.26	29.43	30.15	60.39	20.32	68.82	26.74	67.68	35.47	84.87	13.58	42.42	6.44	61.47
56	32	2	M	H	68.84	41.65	65.79	35.71	70.61	44.06	69.35	36.14		85.36	35.87	58.79	17.88	67.14
56	33	1	F	H	69.15	35.04	65.23	25.48	91.98	32.68	67.73	39.39		79.77	11.62	58.11	8.55	72.13
56	34	3	F	H	71.81	32.62	63.10	25.51	68.99	31.56	66.01	41.23		85.19	9.82	51.43	10.29	60.17
56	35	4	F	H	69.92	32.89	60.62	24.32	68.11	33.65	67.37	36.59		80.00	8.90	50.90	8.78	60.25
56	36	4	M	R	70.53	35.37	61.94	27.95	68.50	36.05	68.81	46.48		78.57	12.75	50.04	10.89	61.90
56	37	1	F	R	69.73	29.39	63.43	21.88	68.70	36.55	68.07	44.09		83.04	9.98	50.96	9.74	66.71
56	38	3	F	C	69.33	33.55	64.91	27.32	69.97	31.44	67.09	37.86		75.12	14.25	54.59	7.87	65.21
56	39	3	M	R	70.41		61.77	23.88	69.71	30.21	67.12	37.24		81.29	13.59	48.68	10.76	71.60
56	40	2	F	C	68.76	33.34	64.67	22.42	68.77	33.01	50.11	43.43		81.88	15.63	52.49	7.63	67.04
56	41	1	M	R	70.38	32.48	65.46	26.33	71.30	30.31	68.48	47.37		76.06	23.92	62.98	8.19	70.79
56	42	2	M	C	69.81	39.42	64.33	27.78	69.19	39.25	68.02			81.90	15.51	52.73	8.84	70.15

dr skin	wg meat	wg skin
17.7	69.34	26.78
33.42	66.08	38.85
42.58	77.13	33.80
23.11	70.91	31.90
19.22	68.66	38.02
31.60	72.45	40.63
22.18	70.66	27.03
37.63	74.50	41.78
35.44	72.94	30.04
23.17	68.82	30.10
24.64	72.46	34.85
30.54	71.61	31.44
15.47	74.10	23.11
28.18	68.59	39.94
51.00	69.60	43.00
41.67	69.36	36.42
17.40	67.90	29.60
22.76	64.86	24.63
39.71	78.75	38.96
21.97	62.35	32.49
24.97	65.31	36.96
17.35	76.70	30.48
31.73	72.12	39.00
28.28	76.42	33.34
27.99	60.49	29.18
28.00	67.93	25.46
20.70	62.19	32.56
20.79	69.40	25.81
28.46	69.62	32.29
20.24	65.11	31.26
26.49	15.19	26.57
39.23	71.54	29.19
23.05	76.14	32.34
19.68	70.04	25.53
20.94	65.03	28.05
18.13	67.52	32.31
14.33	63.43	
32.16	76.65	35.15
51.00	69.60	43.00
19.91		33.17
11.31	64.72	21.25
19.80	65.21	24.60
28.96	72.78	26.31
17.46	63.77	26.11
26.62	66.08	47.07
11.59	63.18	27.40
31.73	69.46	46.06
26.55	64.81	31.65
20.47	71.06	24.64
16.51	67.73	18.34

protein %							
br meat	br skin	th meat	th skin	dr meat	dr skin	wg meat	wg skin
24.21	7.88	13.91	8.65	20.25	10.23	18.98	12.57
24.28	11.18	17.20	11.69	20.45	14.45	20.07	15.01
22.91	12.39	16.86	10.82	18.02	17.31	21.08	14.95
22.29	9.31	19.11	9.89	18.42	10.39	18.59	13.46
22.81	8.02	15.80	9.52	18.00	10.70	18.60	16.56
22.52	13.46	19.77	9.94	18.34	13.82	20.19	16.12
23.22	10.11	19.81	9.25	17.78	11.33	21.21	12.38
23.97	10.55	16.70	10.24	18.14	17.95	19.79	15.55
21.05	12.86	23.95	9.57	20.76	17.86	19.70	12.94
21.82	7.00	17.83	11.28	18.50	14.41	18.45	13.15
23.65	12.08	18.28	8.90	19.80	11.38	19.21	13.53
23.36	10.36	19.75	8.02	17.99	16.66	19.47	13.25
21.50	7.69	16.95	9.30	17.29	8.72	21.18	11.63
23.14	10.24	15.29	11.70	18.12	13.02	17.80	14.43
22.26	11.47	17.17	11.10	15.76	21.34	18.85	17.38
21.45	10.85	14.21	9.97	17.37	15.73	18.71	15.00
22.48	5.93	15.60	8.81	18.69	9.56	20.04	13.88
22.06	14.35	16.75	9.26	18.75	12.35	18.99	12.08
21.18	16.88	20.30	12.09	21.00	17.33	21.09	15.62
21.89	8.18	14.13	8.83	19.45	11.97	17.15	14.00
23.39	8.32	18.55	10.99	18.98	12.20	17.45	15.01
22.48	8.54	18.20	10.35	19.64	9.04	20.91	13.22
21.75	12.87	16.44	13.65	18.15	13.83	18.73	16.32
23.40	12.93	21.70	11.08	17.44	15.49	21.08	14.06
23.81	13.51	17.21	7.92	17.25	14.87	19.13	12.26
25.08	12.15	18.04	7.62	18.13	13.05	20.17	11.60
23.82	8.77	15.91	7.98	17.71	11.28	17.74	13.38
23.31	11.05	18.53	9.87	18.31	11.37	19.70	12.17
23.70	11.13	18.97	8.53	19.06	16.27	22.02	16.29
23.74	9.57	16.99	8.48	17.61	11.80	18.52	14.21
23.24	9.21	17.09	9.31	18.33	14.58	4.59	9.72
23.51	15.24	18.79	10.03	18.71	18.99	21.66	12.07
25.62	15.62	18.91	0.00	20.05	12.74	22.06	15.03
23.70	11.80	17.90	10.54	20.04	11.44	19.32	12.23
23.83	8.26	18.06	12.88	19.21	11.37	18.49	11.89
22.78	17.75	17.90	8.32	18.28	9.62	21.08	13.90
22.79	12.22	17.65	6.72	20.09	9.32	21.34	0.00
23.22	12.86	16.71	10.06	19.21	15.38	22.33	14.16
24.92	12.92	17.33	12.27	16.05	26.35	20.25	18.85
23.81	14.74	17.49	11.58	18.84	11.86	0.00	16.92
22.89	10.26	16.62	8.19	19.64	6.63	20.63	9.38
24.93	11.22	19.09	8.20	18.77	11.74	21.14	11.38
24.92	13.64	15.84	10.91	19.52	16.87	21.50	11.54
24.82	11.92	16.28	6.54	20.14	11.00	18.94	13.83
24.33	11.27	18.20	9.22	18.87	14.09	19.51	19.82
24.63	9.29	18.97	10.53	21.39	6.91	20.02	13.17
22.98	15.76	15.67	13.73	20.17	15.93	20.50	18.14
24.47	13.63	23.69	10.98	16.60	14.85	18.80	15.00
22.96	11.32	19.14	10.20	17.97	11.98	21.66	13.25
24.36	11.55	35.01	2.98	26.15	10.17	20.83	10.07

Lipid							
br meat	br skin	th meat	th skin	dr meat	dr skin	wg meat	wg skin
2.28	53.02	21.10	55.82	6.30	47.55	8.40	34.37
2.46	38.59	16.87	44.02	5.95	28.79	10.30	23.63
2.42	38.53	16.13	47.87	6.77	23.34	6.25	29.28
2.68	39.93	11.19	44.34	5.18	34.58	7.63	28.74
1.84	51.87	17.86	53.20	6.14	44.95	8.49	27.00
3.22	40.84	14.90	48.21	7.01	29.91	7.68	23.56
4.00	48.62	15.74	52.11	6.51	39.77	8.81	33.42
2.43	43.04	16.01	47.00	7.45	29.74	6.77	21.67
4.84	40.01	8.70	52.38	3.81	32.53	7.31	30.14
4.61	56.25	12.08	40.59	14.60	47.80	8.36	30.54
2.20	41.83	14.21	46.99	4.42	34.81	7.30	25.30
1.66	44.92	15.37	54.90	6.68	37.90	7.72	28.90
4.38	55.39	19.65	58.83	8.29	47.64	7.40	38.68
1.77	41.93	17.16	41.96	6.54	33.18	8.15	21.70
2.51	39.66	14.67	44.84	8.70	20.50	8.23	23.05
3.94	40.59	20.84	51.35	7.49	22.03	8.27	26.19
3.70	54.15	19.77	56.17	7.18	45.40	9.48	33.02
2.94	44.64	16.39	55.53	7.45	41.93	10.29	36.95
3.21	33.31	10.20	43.74	3.91	26.31	5.69	24.48
4.79	54.62	18.67	50.51	4.60	42.52	10.36	29.08
1.82	47.34	12.71	49.87	5.58	36.68	9.27	25.61
3.62	48.62	13.70	48.91	5.29	43.04	6.35	30.15
2.91	39.05	16.25	46.90	6.31	29.76	7.24	25.53
2.88	42.48	9.61	50.46	7.09	39.29	6.51	28.12
5.10	42.60	21.02	56.37	10.33	38.26	12.50	29.77
4.07	38.25	19.86	51.63	5.95	33.56	9.52	33.96
3.87	46.05	14.44	53.70	7.24	43.21	10.79	27.71
4.55	47.52	14.05	54.25	7.07	43.33	8.69	34.98
5.46	50.12	20.77	61.16	6.50	40.91	9.61	34.16
3.97	50.96	19.08	56.72	10.51	46.52	9.92	31.26
5.60	50.64	20.41	60.32	8.78	40.46	25.65	26.88
3.68	37.98	12.86	49.30	7.99	29.42	8.62	29.30
3.39	42.29	13.27	64.65	5.29	42.55	6.91	31.46
5.65	52.61	18.89	56.21	8.21	46.70	8.27	35.67
4.38	47.33	18.12	46.93	10.01	42.95	9.95	30.50
4.75	39.17	17.37	53.77	10.17	43.43	10.14	29.12
5.74	54.70	21.03	61.30	9.89	55.73	12.30	68.53
3.79	41.10	16.40	48.89	7.73	32.44	6.80	26.13
2.81	44.68	14.81	49.57	8.87	25.32	8.84	24.99
4.78	48.74	20.18	56.91	10.36	47.71	30.25	34.09
5.37	50.65	24.65	57.56	11.48	51.97	11.25	34.77
4.84	49.24	16.27	59.58	10.59	47.57	11.28	34.88
3.01	42.52	16.88	52.25	7.94	41.39	8.04	32.32
4.51	53.71	17.03	63.60	8.18	52.00	10.76	39.16
5.05	44.49	18.28	51.85	10.22	38.84	10.02	22.29
5.17	49.14	18.50	56.21	7.48	52.70	11.67	34.91
2.93	40.95	16.06	49.89	5.85	34.28	9.02	21.25
4.42	41.38	9.04	55.07	15.06	41.08	10.21	32.39
5.13	50.50	17.00	60.22	10.90	46.53	8.82	40.54
5.24	50.89	36.04	24.82	10.80	51.47	9.92	44.83

16.98	61.77	16.20	24.69	8.58	18.38	7.59	20.10	10.68	20.70	9.00	4.76	54.96	17.13	61.83	10.59	52.21	12.81	46.55
18.19	70.47	24.16	24.06	10.00	17.40	11.98	19.72	10.01	21.57	12.43	3.90	48.09	15.20	51.96	7.73	45.02	9.04	39.00
18.93	64.93	19.67	23.05	6.39	18.14	6.42	20.10	12.07	20.98	11.79	8.06	60.49	21.90	67.32	8.42	51.72	11.33	48.16
23.10	69.81	20.60	23.58	15.21	17.68	9.17	20.17	13.58	20.99	10.69	4.82	43.79	19.31	58.27	7.14	45.20	9.08	41.21
15.14	65.89	19.04	24.66	8.65	17.65	8.79	18.60	9.81	19.45	10.85	5.84	59.50	21.08	64.94	9.63	55.03	10.07	46.14
30.47	70.57	28.63	23.00	16.01	18.49	8.75	19.55	16.04	21.04	13.50	5.48	39.76	14.16	52.92	6.31	36.60	8.77	33.66
12.52	67.62	22.04	24.87	10.51	19.01	5.90	20.25	8.42	22.52	13.20	4.93	58.11	16.90	72.46	7.83	58.85	10.79	46.70
16.09	57.61	14.62	25.01	6.68	19.60	6.96	20.07	11.46	19.86	8.90	5.51	65.73	17.15	73.23	8.88	59.76	14.61	51.98
20.56	67.33	21.70	24.09	10.29	17.48	10.49	19.39	12.59	19.96	11.63	4.03	50.27	17.50	58.18	9.79	48.64	9.68	41.96
26.60	71.19	25.77	24.35	10.62	18.22	8.27	19.36	15.73	20.51	13.31	4.61	50.98	16.18	63.67	7.27	43.41	8.30	38.35
14.04	61.02	22.30	23.86	14.96	19.66	7.52	19.71	8.91	19.64	12.55	5.68	48.01	18.60	64.11	9.55	54.55	12.55	43.71
17.34	66.22	25.95	23.14	11.94	17.16	9.80	18.59	10.02	20.22	12.51	4.92	45.02	15.43	52.98	9.18	47.78	10.31	35.71
22.63	65.71	23.43	24.19	15.93	17.63	0.00	23.91	14.67	20.54	12.63	4.07	42.85	16.77	67.65	4.74	50.18	10.72	41.27
35.11	60.22	72.83	25.01	10.33	17.34	9.71	19.94	22.56	18.09	38.64	4.71	55.73	20.69	64.34	7.55	41.69	11.95	14.41
12.41	59.28	20.75	24.26	11.59	17.67	6.45	19.09	7.96	18.86	11.31	4.80	53.06	19.95	66.64	10.94	56.19	12.96	43.19
17.41	61.75	17.95	23.23	9.05	17.03	7.71	20.26	11.06	18.63	9.75	4.58	53.13	20.04	64.20	9.27	52.46	11.55	44.58
10.61	64.21	17.62	24.73	11.70	0.00	6.66	19.35	6.87	20.95	9.96	5.43	54.90	37.49	65.84	9.26	57.93	11.68	46.60
16.31	63.98	21.95	23.58	10.98	19.03	8.04	19.98	10.53	19.48	11.67	4.19	53.09	13.83	61.27	6.79	54.02	10.97	41.48
25.07	11.71	24.89	24.46	8.85	17.92	0.00	19.80	13.29	3.75	12.57	5.10	50.50	20.99	68.03	9.24	39.75	28.26	37.95
14.66	56.50	23.04	24.73	9.90	18.60	6.98	19.54	10.37	18.41	12.36	4.11	54.10	17.19	67.21	8.21	60.38	14.17	41.28
29.99	66.82	31.50	23.88	12.31	17.92	11.98	19.62	15.34	20.92	13.74	4.01	39.01	16.66	45.48	9.97	35.81	10.39	29.87
15.35	67.93	30.32	24.92	14.28	16.76	10.77	18.94	8.46	20.63	14.54	3.76	42.26	15.22	54.46	7.40	46.66	9.74	33.41
22.08	67.53	23.49	24.74	10.83	18.37	9.68	19.75	12.57	19.80	11.48	4.03	44.91	14.96	60.95	9.39	44.35	9.52	37.40
17.05	69.47	15.21	25.89	9.05	20.53	6.16	20.68	10.91	21.26	9.09	4.12	57.21	18.52	68.14	11.27	53.09	9.34	50.65
20.77	71.77	28.83	25.22	9.55	19.71	7.61	20.97	12.87	20.81	17.36	3.81	52.58	15.86	67.09	8.07	49.09	8.19	42.85
17.13	75.40	22.76	25.38	11.44	18.76	9.32	20.54	9.70	22.09	11.76	4.05	50.40	13.11	60.10	7.41	46.93	7.21	39.92
10.98	70.98	19.40	25.18	10.33	18.77	5.61	20.09	3.41	48.14	6.05	4.64	57.25	16.33	71.77	8.43	27.66	19.68	25.13
15.81	69.59	13.78	24.63	14.64	17.71	7.30	19.70	10.34	20.78	7.74	4.40	47.28	18.78	64.21	9.53	55.05	9.08	48.43
29.82	69.03	18.21	25.38	6.89	17.90	7.45	19.33	18.55	20.45	9.97	4.52	56.96	21.33	68.99	12.53	43.66	9.18	44.77
24.01	72.02	23.19	23.40	13.62	19.98	11.94	17.81	12.81	20.04	11.62	5.72	44.60	13.04	51.13	13.03	40.56	7.79	38.50
15.11	67.33	26.69	23.78	18.48	19.47	6.48	63.50	9.74	3.08	15.07	5.50	42.20	13.34	63.99	36.51	54.71	1.50	41.40
9.59	56.55	16.97	24.77	8.29	17.98	6.63	20.91	6.98	19.01	10.57	5.68	63.48	20.10	71.08	15.61	65.83	14.60	51.73
22.34	72.99	22.13	26.44	17.17	18.89	12.43	22.07	13.58	20.52	11.08	3.79	40.01	16.35	57.01	7.57	47.22	7.60	38.99
13.02	67.05	24.41	24.85	10.42	18.01	8.03	19.41	7.85	20.05	12.61	4.15	47.29	16.69	56.09	9.88	52.47	9.85	39.05
11.87	60.41	8.79	24.39	9.58	29.63	2.55	48.97	3.70	44.25	2.84	4.35	60.98	40.22	37.06	30.70	27.48	29.00	29.48
26.96	70.85	22.69	26.60	20.93	20.11	11.49	19.73	15.08	21.72	14.49	4.56	37.42	14.10	52.80	9.66	40.86	8.94	49.37
8.93	63.62	17.71	24.61	7.55	20.20	6.37	5.78	6.01	20.53	10.73	6.24	57.41	14.56	68.15	2.24	61.31	11.74	49.88
14.61	62.68	18.12	24.02	6.62	18.98	7.67	18.66	10.00	21.30	10.65	4.18	60.76	17.92	66.82	12.35	58.44	12.69	48.12
9.68	62.35	19.38	24.06	5.97	20.04	6.64	19.21	6.42	20.34	12.29	6.02	61.14	19.34	69.04	12.68	59.93	12.29	51.12
12.59	67.23	24.64	23.15	8.24	19.04	7.85	19.50	8.05	20.97	13.19	6.31	56.39	19.01	64.20	12.00	55.90	10.22	40.33
15.90	65.03	14.62	25.14	7.05	18.64	7.61	20.88	10.09	20.76	8.17	5.13	63.57	17.94	70.50	10.42	53.36	11.17	47.74
19.51	68.64	26.23	23.03	9.47	19.16	5.72	19.58	13.38	22.59	16.30	7.63	56.99	15.94	66.96	10.45	55.19	10.32	45.85
10.91	67.48	16.68	24.05	13.59	18.61	8.19	21.68	7.61	22.18	10.46	5.54	86.41	19.62	67.93	8.60	62.17	10.69	52.29
18.57	64.84	31.91	25.58	10.42	18.54	5.92	20.94	12.44	32.35	18.05	5.66	56.24	16.79	71.66	10.30	54.55	17.54	38.52
15.01	71.85	16.36	22.53	16.15	21.75	6.03	20.31	10.46	22.65	8.61	7.09	51.37	12.79	67.63	8.38	59.24	8.87	44.02
27.66	68.92	14.90	24.73	9.40	18.81	6.38	21.61	16.80	22.04	14.90	5.46	51.19	16.86	65.83	9.20	43.95	9.94	85.11