

The background of the book cover is a vibrant green, densely populated with various traditional African musical instruments. These include several different styles of drums (some with yellow and green patterns, others with orange and red), maracas, and stringed instruments like the mbira. A large, central orange circle serves as a backdrop for the title text. The instruments are depicted in a stylized, illustrative manner with bold outlines and flat colors.

ISINGENISO ESIYISISEKELO EMKHAKHENI WOMCULO

**Ngu-
ANDREW-JOHN BETHKE**

Isingeniso Esiyisisekelo Emkhakheni Womculo

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**Ingxenye Yokuqala
Umhlahlandlela Wabafundi**

Ngu-Andrew-John Bethke



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Typesetter: Susan Elliott
Proofreader: Mbukiseni Mkhize

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Amazwi ombhali

Ukubhala nokuhumusha incwadi yokufundisa kuwumsebenzi omkhulu, ikakhulukazi uma lolo limi kuwulimi olusathuthukisa amagama obuchwepheshe azokwenza ukuthi lokhu okuhunyushwayo kuhunyushwe ngendlela ezwakalayo. Le ncwadi iwumphumela womsebenzi weminyaka owenziwe iqembu elikhulu labantu abahlukahlukene. Nangaphambi kokuba kubhalwe okuqukethwe yile ncwadi, ithimba longoti bezolimi bahlangana ukuze baqambe amatemu amasha esiZulu ukuze baqinisekise ukuthi kuhunyushwa ngendlela ekuyiyo. Nakuba amatemu omculo ahunyushwa ngokwethukela kusukela esiNgisini kuya esiZulwini iminyaka eminingi, kuze kube muva nje, alukho uhlu olusemthethweni lwamatemu ezobuchwepheshe akhona omculo asetshenziswayo njengamanje. Ngokusizwa yiHhovisi Lokuhlela Nokuthuthukiswa Kolimi eNyuvesi YaKwaZulu-Natali, ongoti bezilimi abamnkantshubomvu baqamba amagama omculo angaphezu kwama-500 esiZulu.

Ngemuva kokubhala umbhalo, wabe usuhunyushwa ngokusizwa wuxhaso lwezezimali zakwaNational Institute for Humanities and Social Sciences. Ukuhumusha ngokwako kwenziwa ngabafundi baseNyuvesi iDurban University of Technology, belulekwa uDkt Sylvia Zulu. Kwathi lapho sekuhunyushiwe, abafundi bomculo baseNyuvesi yaKwaZulu-Natali bawuhlolisisa umsebenzi ngenhloso yokuqinisekisa ukuthi lokhu okuhunyushiwe kuyezwakala yini ikakhulukazi kubafundi abasafufusa. Ekugcineni, uDkt Phindile Dlamini, uNoxolo Mthethwa kanye nethimba lonke lase-UKZN Press benza isiqiniseko sokuthi le ncwadi iba sezingeni elifanelekile. Sekukonke, le ncwadi iwumphumela wokusebenzisana phakathi kongoti bezilimi nongoti bomculo, abashicileli, abafundisi nabafundi abavela emanyuvesi ahlukahlukene. Ngifisa ukudlulisa ukubonga kwami kubo bonke abantu abakulolu hlelo abahlanganyele kumbono wami wokwenza injulalwazi yomculo ifinyelele kubantu abakhuluma isiZulu ngolimi lwebele. Ngiyethemba ukuthi le ncwadi izosiza abafundi nothisha ngendlela efanelekile.

Ukubhalwa komculo

Umculo uthi mawufane nolimi. Isibonelo, kokubili umculo nolimi kwaqala kuyizinto eziphinyiswa ngomlomo kuphela. Lokho kuchaza ukuthi umculo nolimi kwaqala ukuba khona okokuqala ngqa ngesikhathi abantu bezama ukuxhumana ngokukhuluma noma ngokucula. Kwathatha isikhathi eside impela emlandweni womculo nezilimi ukuba abantu baqale ukuzama ukubhala imisindo ababeyicula ngokusebenzisa izimpawu. Uphawu ngalunye lwalumele uhlobo oluthize lomsindo, kanti izimpawu ezihlanganisiwe zona zazimele imisindo yamagama aphelele. Kwesinye isikhathi, izithombe zangempela ezincanyana zazisetshenziswa ukumela umsindo wamagama athize. IMandarin (okuwulimi lwamaShayina) iyisibonelo sezilimi ezibhaliwe ezaziwulolu hlobo. Kunezizathu eziningi ezahlukeni ezenza abantu babhale ulimi nomculo. Isizathu esibaluleke kakhulu ukuthi lokho ababe sebekubhalile kwakubavumela ukuthi bakuqophe ukuze bakwazi ukubukela kukho noma mhlawumbe ukuze nabanye bakwazi ukwenza okufanayo.

Esikhathini esingaphezulu kwamakhulu eminyaka, amasiko ngokuhlukana kwawo, aseqhamuke nezimpawu ezahlukeni zokubhala umculo. Isiko nesiko seliwubheke ngendlela yawo ehlukile umculo. Isibonelo, eNdiya laphelele izinhlobo ezithize zendidiyelosigqi ziyisisekelo sezinhlobo eziningi zomculo, ukubhalwa kokuhlanganiswa kwezindidiyelosigqi kwaba yinto esezingeni eliphezulu. EYurophu, ngezikhathi kusaqalwa ukubhalwa komculo, okwakungesikhathi imvunge isathathwa njengento ebaluleke kakhulu, izindlela zokumela iphimbo ngendlela efanele zaba namandla. Amanye amasiko anezindlela zawo zokubhala umculo ukuqhakambisa lokho okubaluleke kuwo.

Kungani abaculi befundela ukufunda umculo obhaliwe? Ikhono lokwazi ukufunda umculo obhaliwe lisiza abaculi bakwazi ukufunda umculo omningi ngokushesha futhi nangendlela efanele. Leli khono liphinde futhi lisize abaculi ukuba bakwazi ukubhala umculo wabo ukuze nabanye abaculi bafunde isitayela sokucula kwabo, kanti futhi namanye amaqembu abaculi akwazi ukucula lowo mculo obhaliwe. Umphumela

wokubhalwa komculo ukuthi kungagcineka izinhlobo ezahlukenene zomculo ukuze izizukulwane ezilandelayo nazo ziwuthole. Isibonelo, indlela esingafunda ngayo umculo weminyaka engamakhulu eyedlule ukusebenzisa imibhalo elotshwe ngesandla yomculo wangaleso sikhathi.

Le ncwadi esihloko sithi 'Isingeniso Esiyisisekelo Emkhakheni Womculo,' iyisifundo esethula kubafundi uhlelo lokubhalwa komculo wasentshonalanga. Lolu hlelo lukhethwe ngoba lwaziwa abaculi emhlabeni jikelele. Luthathwa njengolimi lomculo okuyilo 'olujwayelekile,' lapho abaculi ngokuhlukana kwabo ngamasiko bengacula ndawonye noma babonisane ngamasu okuqamba izingoma. Ukubhalwa komculo wasentshonalanga akulona uhlelo oluphelelisiwe. Akuwuvezi umahluko omncane wawo wonke amasiko omculo ngokulingana. Isibonelo, ama*quarter tones*, okuyinto eyejwayelekile emculweni wasemazweni aseMiddle East naseNdiya, anzima ukubhaleka ohlelweni lomculo lwasentshonalanga. Kodwa-ke, lolu hlelo lungasetshenziswa ngempumelelo ethi mayibonakale impela ekubhalweni komculo wesintu wase-Afrika, ne*Jazz* kanye ne*pop*, nokuyizinhlobo zonke zomculo ezidumile eNingizimu Afrika.

Imithetho yokubhala indidiyelosigqi

Iyini indidiyelosigqi?

Indidiyelosigqi ichazwa njengephethini enamandla aphindaphindiwe okunyakaza noma omsindo. Emculweni, indidiyelosigqi ichaza ibanga lomsindo noma ukuthuleka. Ukuphindaphindeka kwezindidiyelosigqi ezihlangene yilokhu ngolimi okujwayelekile esikubiza ngokuthi 'isigqi' (sisazofunda kabanzi ngencazelo yaleli gama 'isigqi' kuso lesi sifundo ngokuhamba kwesikhathi). Ukufunda ukubhala nokulalela amabanga ahlukenene amanothi omculo kusiza abaculi ekukhipheni umculo onendidiyelosigqi enembayo. Obunye futhi ubuhle bokuqondisisa kahle ukubhalwa kwendidiyelosigqi ukuthi kusiza abaculi bazi ukuthi benzani uma becula. Lokhu kusiza ikakhulukazi uma abaculi becula behlangene njengamaqembu, lapho khona kubalulekile ukuthola isigqi esifanayo.

Incazelo yendidiyelosigqi yomculo

Yinoma yini emayelana nobude besikhathi (ukubaluleka kwesikhathi) okuthathwa amanothi omculo ngesikhathi kuculwa, nokuyinto ehlukile uma kukhulunywa ngephimbo. Indidiyelosigqi ihlanganisa izincazelo eziningi zobuchwepheshe ezimayelana nesikhathi; ezibandakanya isigqi, umgqigqo, ukuhamba ngesigqi kanye nesivinini.

1

Inothi elizigqizine, inothi elizigqimbili, inothi elisigqisinye kanye nobungakosikhathi sokuthula

Umsebenzi owenziwayo

1. Lalela noma cula le ngoma edumile ethi, Nkosi sikelel' i-Afrika. Ungasebenzisa le linki kaYouTube uma ufuna ukulalela le ngoma: <https://www.youtube.com/watch?v=NBKjWRjwMkY>.
2. Qaphela ukuthi amagama ahlukane kanjani aba ngamalunga.
3. Bheka ukuthi ngiwahlukanise kanjani lawa magama angezansi aba izinhlamvu:

Nko-si-si-ke-le-l'i A-fri-ka
Ma-lu-pha-ka-nyi-sw'u-pho-ndo lwa-yo
Yi-zwa i-mi-tha-nda-zo ye-thu
Nko-si si-ke-le-la . . .

4. Phinda futhi ulalele le ngoma bese uyazama ukuthola ukuthi uma kuculwa yimaphi amalunga enziwe aba mafushane, aba phakathi nendawo noma aba made emculweni.
5. Manje, phinda futhi ulalele le ngoma okwesithathu bese ngaphezu kwelunga ngalinye usebenzise uhlamvu okungaba **u-a, u-b noma u-c** ukukhombisa ukuthi ilunga lifishane, liphakathi nendawo noma lide. Isibonelo:

Amanothi amafushane = **a**

Amanothi aphakathi nendawo = **b**

Amanothi amade = **c**

a a a a b b b b c
Nko-si-si-ke-le-l'i A-fri-ka
Ma-lu-pha-ka-nyi-sw'u-pho-ndo lwa-yo
Yi-zwa i-mi-tha-nda-zo ye-thu
Nko-si-si-ke-le-la . . .

6. Impendulo ephелеle kufanele ibukeke kanje:

a a a a b b b b c a a a a b b a a b c
Nko-si si-ke-le-l'i A-fri-ka Ma-lu-pha-kan-yi-sw'u-pho-ndo lwa-yo

a a a a b b b b c c c a a b c
Yi-zwa i-mi-tha-nda-zo ye-thu Nko-si si-ke-le-la . . .

7. Halala, uma uthole impendulo okuyiyo! Ubhale umculo ngendlela eyisisekelo okokuqala ngqa! Ake sithi ukuqhubeka futhi.

8. Shaya izandla ngesikhathi ucula ilunga ngalinye. Ungaqaphela ukuthi uhlamvu u-b lude okuphindeke kabili kuno-a, futhi uhlamvu u-c lude okuphindeke kabili kunohlamvu u-b. Uma ngabe uhlamvu u-a **lulingana nesigaba esisodwa**, ungazama ukuthola ukuthi zinde kangakanani izinhlamvu u-b no-c?

a= isigaba esisodwa

b= 2 x a

c= 2 x b

9. Manje, faka uhlamvu ngalunye empendulweni yakho ngobude bamalunga obufanele:

1 1 1 1 2 2 2 2 4 1 1 1 1 2 2 1 1 2 4
Nko-si si-ke-le-l'i A-fri-ka Ma-lu-pha-ka-nyi-sw'u-pho-ndo lwa-yo

1 1 1 1 2 2 2 2 4 4 4 1 1 2 4
Yi-zwa i-mi-tha-nda-zo ye-thu Nko-si si-ke-le-la . . .

10. Ebesikwenza kusondelene kakhulu kunalokhu okwenziwa uma kubhalwa uhlaka lobhalomculo. Kulolu hlelo, kusetshenziswa izimpawu ukukhombisa ubude

bamanothi. Lokhu okungezansi kukhombisa ukuthi izimpawu zibukeka kanjani zihambisana namagama abizwa ngawo amanothi:

Inothi elibalwa kanye (**inothi elisigqisinye**) = 
 Inothi elibalwa kabili (**inothi elizigqimbili**) = 
 Inothi elibalwa kane (**inothi elizigqizine**) = 

11. Uma sisusa zonke izinombolo ezingaphezulu kwelunga bese sifaka lezi zimpawu, kuzobukeka kanje:



Nko-si si - ke - le - l'! A - fri - ka Ma - lu - pha - ka - nyi - sw'u - pho - ndo lwa - yo
 Yiz - wa i - mi - tha - nda - zo ye - thu Nko - si si - ke - le - la...

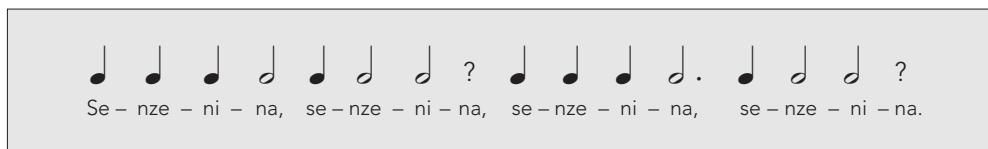
12. Manje ake sethule olunye uhlobo lwenothi:

Inothi elibalwa kathathu (**inothi elizigqimbili elinedothi**) = .

13. Manje, ake ulalele noma ucule ingoma ethi, **Senzeni na**, uyiphindaphinde kaningana, bese ubhala amalunga alo njengoba senzile engomeni ethi, **Nkosi sikelel' iAfrika**. Ungasebenzisa le linki kaYouTube uma ufuna ukulalela le ngoma: <https://www.youtube.com/watch?v=5fDU1PYWT8A>.

Se-nze-ni-na, se-nze-ni-na, se-nze-ni-na, se-nze-ni-na.
 Se-nze-ni-na, se-nze-ni-na, se-nze-ni-na, se-nze-ni-na.

14. Manje, ake uzame ukuthi ungakwazi yini ukuthola ubude bamalunga bese ububhala ezindaweni ezifanele zamanothi:



Se - nze - ni - na, se - nze - ni - na, se - nze - ni - na, se - nze - ni - na.

15. Kungenzeka ukuba uthole ukuthi ilunga u'-na' elivela izikhathi ezimbili nezikhathi ezine, ubude balo **bubaleka kahlanu!** Empeleni, uma ngabe igama elithi

Senzenina libhalwe laphela ngendlela ejwayelekile, inothi elibalwa kane (**inothi elizigqizine**) libhalwa ngokubaleka okukodwa **kukaCWAKA**. Kodwa simkhombisa kanjani uCWAKA?

16. Kunophawu ngesigaba ngasinye sikacwaka, kanye nesomculo. Izimpawu zibukeka kanje:

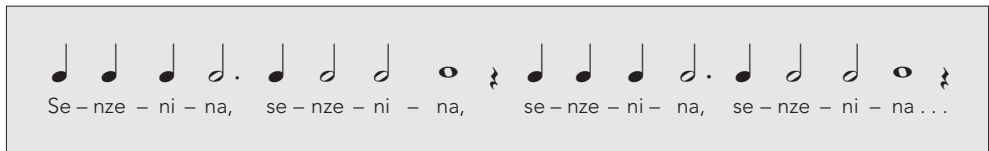
Inothi elibalwa kanye (**inothi elisigqisinye**) =  (khumbula ukuthi lokhu yi- zc yobungakosikhathi sokuthula $\frac{1}{2}$)

Inothi elibalwa kabili (**inothi elizigqimbili**) =  (khumbula ukuthi ukuphumula kwenothi elizigqimbili 'kuhlala' kulayini)

Inothi elibalwa kane (**inothi elizigqizine**) =  (khumbula ukuthi inothi elizigqizine 'lilenga' kulayini)

17. Ake ubhale indlela ocabanga ukuthi inothi elibalwa kathathu lingabukeka ngayo.

18. Buyela emuva futhi engomeni ethi, **Senzeni na**, bese unezezela **inothi elizigqizine ngobungakosikhathi sokuthula benothi elisigqisinye** ngaphezu kwamalunga amabili o'-na' esike sakhuluma ngawo. Kufanele kubukeke kanje:

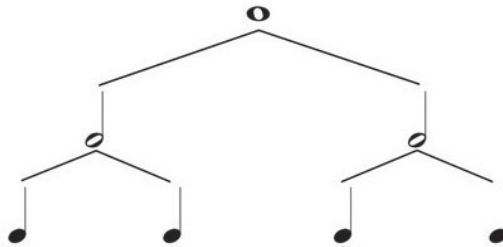


Se - nze - ni - na, se - nze - ni - na, se - nze - ni - na, se - nze - ni - na . . .

2

Ingxenye yenothi elisigqisinye, ingxenyana yenothi elisigqisinye, ubungakosikhathi sokuthula namanothi anamadothi

Uma sibuka umdwebo wenothi elizigqizine, owenothi elizigqimbili nowenothi elisigqisinye, kusobala ukuthi inothi elizigqizine elilodwa lilingana namanothi azigqimbili amabili, nokuthi inothi elizigqimbili elilodwa lilingana namanothi asigqisinye amabili. Lokhu kuphinde kuchaze ukuthi inothi elizigqizine elilodwa lilingana namanothi asigqisinye amane.



Akuwona wodwa amanothi azigqizine, amanothi azigqimbili namanothi asigqisinyeasetshenziswayo njengezimpawu zamanothi emculweni. Nokho umculo, isikhathi esiningi, usebenzisa izimpawu zesikhathi okuyilezi ezincane kunenothi elibalwa kanye (inothi elisigqisinye). Sizibhala kanjani izimpawu zenothi elincane kunenothi elibalwa kanye? Lo mdwebo okhonjiswe ngenhla ungaqhutshwa ngokuhlukanisa inothi elisigqisinye ngohhafu; ngamanye amazwi, kube nguhhafu uma kubalwa. Inothi elibalwa ngohhafu libizwa ngokuthi ingxenye yenothi elisigqisinye, futhi libukeka kanje:



Ngokufanayo, nayo futhi ingxenye yenothi elisigqisinye ingahlukaniswa ngohhafu; ngamanye amazwi, ibe yikota uma kubalwa. Inothi elibalwa njengekota libizwa ngokuthi yingxenyana yenothi elisigqisinye, futhi lona libukeka kanje:



OKUBALULEKILE

Amanothi azigqimbili, amanothi asigqisinye, ingxenye yamanothi asigqisinye kanye nengxenyana yenothi elisigqisinye, konke lokhu 'kunomsila' oxhumeke ekhanda lenothi. Ingxenye yamanothi asigqisinye kanye nengxenyana yenothi elisigqisinye nazo 'zinamafulegi'.



Kuye ngokwesimo senothi (ozofunda ngaso kabanzi ngokuhamba kwesikhathi kuso lesi sifundo), umsila ungabheka PHEZULU noma PHANSI.

Uma umsila ubheka phezulu, ubekwa NGASESANDLENI SOKUDLA sekhanda lenothi.



Uma umsila ubheka phansi, ubekwa NGASESANDLENI SOBUNXELE sekhanda lenothi.



FUTHI, uma udweba ingxenye yenothi elisigqisinye noma ingxenyana yenothi elisigqisinye:

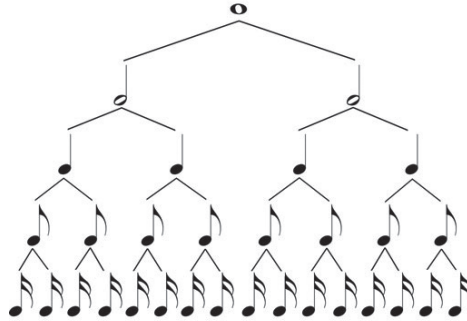
*uma umsila ubheka phezulu, 'amafulegi' aba NGASESANDLENI SOKUDLA.



*uma umsila ubheka phansi, 'amafulegi' NAWO aba NGASESANDLENI SOKUDLA!



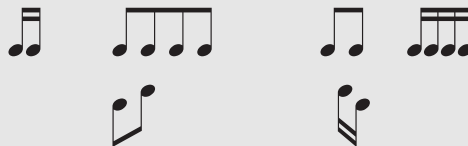
Nawu lo mdwebo ophелеle walokhu okungenhla; lo mdwebo uphinde ukhombise ingxenye yenothi elisigqisinye nengxenyana yenothi elisigqisinye:



Ulwazi luthathwe: <https://www.dummies.com/art-center/music/guitar/how-to-read-music-note-values/>.

Ukuhlanganiswa kwezingxenye zenothi elisigqisinye nezingxenyana zenothi elisigqisinye

Izingxenye zenothi elisigqisinye nezingxenyana zenothi elisigqisinye 'zingahlanganiswa' ndawonye. Nokho ukuhlanganisa amanothi 'akuwenzi abe yinto eyodwa', kepha kwenza kube lula ukuwabona. Nazi ezinye izibonelo:



Qaphela ukuthi kwenzekani lapho kuhlanganiswe khona iziqu zamanothi uma zibheke phansi.

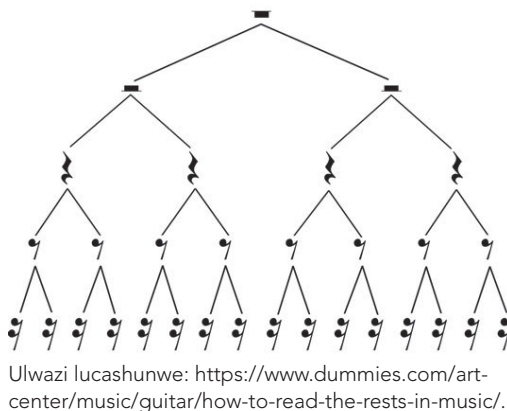
Izingxenye zenothi elisigqisinye nezingxenyana zenothi elisigqisinye zingahlanganiswa ndawonye entweni eyodwa, isibonelo:



Kunezikhala zobungakosikhathi sokuthula ezibalwa ngohhafu kanye nobude bokubala obuyikota. Zibukeka kanje:

Ubungakosikhathi sokuthula sengxenye yenothi elisigqisinye = $\frac{1}{2}$
 Ubungakosikhathi sokuthula sengxenyana yenothi elisigqisinye = $\frac{1}{4}$

Lo mdwebo ukhombisa ukuxhumana kwezinhlobo zobungakosikhathi sokuthula:



Amanothi anamodothi atholakala kaningana emculweni. Kodwa-ke, idothi lenzani ngempela enothini? Impendulo yalo mbuzo ithi mayibe lula: idothi likhombisa ukuthi kufanele UNEZEZELE uhhafu wophawu lwenothi oluyingqikithi emanothini. Isibonelo:



Kulesi sibonelo, inothi eliyinqikithi yinothi elizigqimbili (libalwa kabili). Uhhafu wophawu lwenothi eliyinqikithi ubalwa kanye (inothi elisigqisinye). Ngakho-ke, inothi elizigqimbili elinedothi lilingana no-2+1.



Manje ake ubheke leli nothi:



Kulesi sibonelo, inothi eliyinqikithi yinothi elisigqisinye (libalwa kanye). Uhhafu wenothi eliyinqikithi ubalwa ube nguhhafu ($\frac{1}{2}$) (okuyingxenywe yenothi elisigqisinye). Ngakho-ke, inothi elisigqisinye elinedothi lilingana no- 1 + $\frac{1}{2}$.



Kuthiwani ngezinhlobo zobungakosikhathi sokuthula? Izinhlobo zobungakosikhathi sokuthula zamanothi anamadothi zisebenza ngendlela efanayo njengamanothi ajwayelekile.

Igama	Inothi	Ubungakosikhathi sokuthula	Ubungako benothi
Inothi elizigqizine elinamadothi			6
Inothi elizigqimbili elinamadothi			3
Inothi elisigqisinye elinamadothi			1 ½
Ingxenyana yenothi elisigqisinye elinamadothi			¾
Ingxenye yenothi elisigqisinye elinamadothi			3/8

Ulwazi luthathwe: EnchantedLearning.com.

Umsebenzi owenziwayo

Kunengoma yaseNingizimu Afrika ethi, **Shosholoza**. Le ngoma isebenzisa izingxeny
zenothi elisigqisinye, izingxenyana zenothi elisigqisinye namanothi anamadothi.
Uma ufuna ukuyilalela le ngoma, ungangena kule linki kaYouTube: https://www.youtube.com/watch?v=dt1X_gAx0CM&list=RDdt1X_gAx0CM&start_radio=1&t=0.

Sho - sho - lo - za, sho-sho- lo - za ku le-zo - nta - ba sti-me-la si - pu-m'e

South A- fri- ca...

Kukhona esinye isibonelo esidumile esitholakala **eculweni leSizwe laseNingizumuna Afrika**, esinenothi elinedothi:

Sounds the call to come to - ge - ther and un - it - ed we shall stand . . .

Isingeniso Esiyisisekelo Emkhakheni Womculo

Izimpawu zamanothi zingahlanganiswa ndawonye ukuze kwenzeke izimpawu zamanothi ezinde. Isihlanganisimanothi sibukeka njengolayini ogobile ohlanganisa amanothi amabili. Isibonelo:



Kulesi sibonelo, inothi elisigqisinye (elibalwa kanye) nenothi elizigqimbili (elibalwa kabili) ahlanganiswe ndawonye. Uma wenze la manothi ahlanganisiwe, kungafanele uwabambe kuze kufinyelele esikhathini lapho ebaleka kathathu.

Uma ngabe amanothi amabili ehlanganisiwe enomsila obheke phansi, isihlanganisimanothi sibekwa **NGAPHEZULU** kwamanothi. Ngokufanayo, uma ngabe amanothi amabili ehlanganisiwe enomsila obheke phezulu, isihlanganisimanothi sibekwa **NGAPHANSI** kwamanothi. Isibonelo:



Kungenzeka uzibuze ukuthi, 'empeleni kungani kufanele ngisebenzise izihlanganisimanothi uma ngabe amanothi anamodothi engasetshenziswa ukuhlanganisa la manothi angenhla'? Umbuzo omuhle lo. Ngokujwayelekile, izihlanganisimanothi zisetshenziselwa ukunweba amanothi ngaphesheya kwemigqa yebha yolayini. Ibha nolayini bayo uzofunda kabanzi ngako ekuhambeni kwesikhathi kusona lesi sifundo.

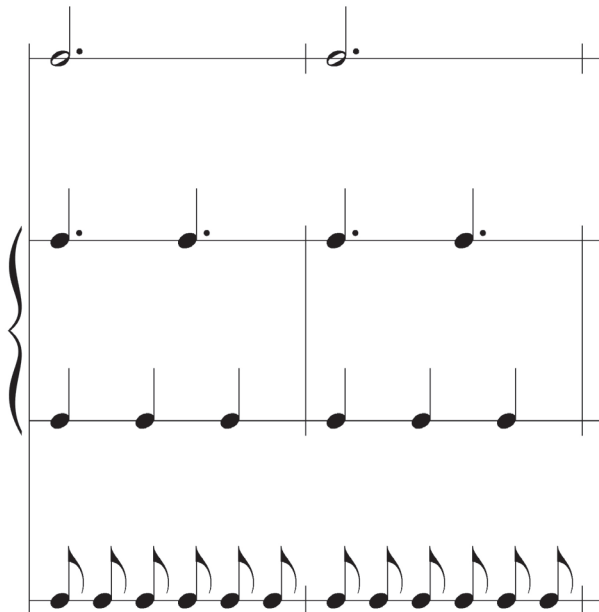
3

Ukuhambangesigqi, inkombasigqi nezigqintathu

Okwamanje sisasebenzise nje igama 'bala' uma sichaza ubude bezimpawu zamanothi. Kunamatemu asetshenziswa uma kukhulunywa ngezimpawu zesikhathi. Lawo matemu-ke nawo adinga ukuchazwa.

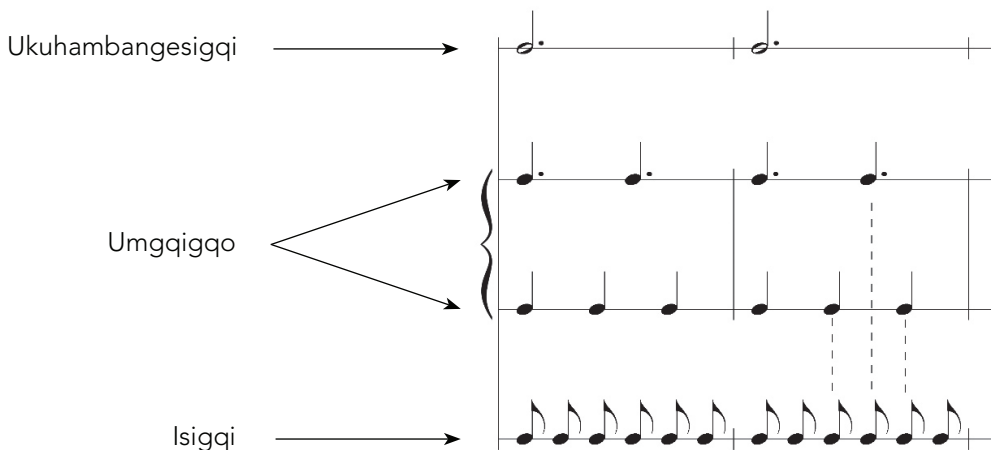
Umsebenzi owenziwayo

Yenza iqoqo labantu abane bese beshaya izandla ngezindidiyelosigqi ezingezansi. QAPHELA, uma olayini ekubhalweni komculo bebewe baqondana ngaphezu komunye futhi behlanganiswe ulayini ome thwi ekuqaleni, lokhu kusho ukuthi bonke olayini kufanele benziwe kanyekanye.



Uma uhlanganisa lezi zindidiyelosigqi ndawonye, uzothola ukuthi kunezindawo lapho kunokugcizelela 'okunamandla'. Ukugcizelela okunamandla yilapho wonke umuntu eshaya izandla zihambisane nenothi ndawonye. Isibonelo, ekuqaleni, ukugcizelela okunamandla kwenzeka kabili uma ushayela izandla umsebenzi wonke; kwenzeka ekuqaleni naphakathi nendawo. Kodwa kukhona nokugcizelela okunamandla amancane. Isibonelo, uma ngabe abantu ababili beshaya izandla kanyekanye. Kulabo abashaya izandla ngamanothi asigqisinye anamadothi kanye nezingxenye zenothi elisigqisinye, loku kugcizelela kwenzeka njalo emuva kwengxenye yenothi elisigqisinye **yesithathu**. Kubantu ababili abashaya izandla ngamanothi asigqisinye kanye nezingxenye zenothi elisigqisinye, ukugcizelela kwenzeka njalo emuva **kabili** kwengxenye yenothi elisigqisinye **yesibili**.

Lesi sibonelo sikhombisa ukulandelana kwezindlela ezintathu kwindidiyelosigqi.



Izincazelo

Isigqi sichaza uhide olungashintshi lwezigqi olusekela umucu womculo.

Umgqigqo uchaza ukugcizelela ngokwemvelo kumjikelezo wezigqi.

Ukuhambangesigqi kuchaza umjikelezo ojwayelikile womgqigqo.

OKUBALULEKILE: Kwesinye isikhathi isigqi nomgqigqo kuthathwa njengezinto ezifanayo.

Ake uzame ukufunda lo musho:

NamhlanjenguLwesibilikantifuthisinesifundo esilandelana kabilisesingeniso esiyisisekelo emkhakheni womculo noDokotela uBethke.

Cishe uzovuma ukuthi kulula ukufunda lo musho uma kunezikhala phakathi kwamagama, futhi uma amagama engamaqoqo emishweni. Qaphela umehluko:

Namhlanje nguLwesibili, kanti futhi sinesifundo esilandelana kabili sesingeniso esiyisisekelo emkhakheni womculo noDokotela uBethke.

Uma kubhalwa umculo, amanothi abhalwa ngendlela yokuthi kuba lula ukuwafunda. Ngakho-ke, kuba lula nokuwacula. Ngokujwayelekile, lokhu khlukana kumele **UKUHAMBANGESIGQI** komculo, okungukuqoqeka okuvamile kwemigqigqo, noma ukuphindaphindeka kwemigqigqo egcizelelayo. **INKOMBASIGQI** iyona ekutshela **NGOKUHAMBANGESIGQI** somucu womculo.

Umsebenzi owenziwayo

Ake ufunde lesi sikhalelo sikaTiyo Soga bese uqaphela ukuthi uyawathola yini amalunga agcizelelayo:

Lizalis' idinga lakho,
Thixo Nkosi yenyano!
Zonk' iintlanga, zonk' izizwe,
Mazizuze usindiso.

Amadolo kweli lizwe,
Makagobe phambi kwakho;
Zide zithi zonk' iilwimi,
Ziluxel' udumo lwakho.

Impendulo yakho kufanele ibukeke kanje:

Liza **lis'** idinga **lakho**,
Thixo **Nkosi** yenyano!
Zonk' i **intlanga**, zonk' **izizwe**,
Mazizuze usindiso.

Isingeniso Esiyisisekelo Emkhakheni Womculo

Uma uqaphelisisa kahle, uzobona ukuthi njalo ohlamvini **lwesine** kunokugcizelela. Lo mjikelezo ucishe ubhalanse ikakhulukazi mawuqala ohlamvini lwesithathu lomjikelezo 3, 4, 1, 2, 3, 4 . . .

Li-za-**lis'** i-di-nga **la**-kho,

3 4 1 2 3 4 1 2

Thixo **Nkosi** yenyano!

Zonk' iintlanga, zonk' izizwe,

Mazizuze usindiso.

Umculo ufana kakhulu nemibhalo yezinkondlo ngoba nawo umculo uhlukaniseke ngezigqi ezinamandla nalezo ezingenamandla. Uma singaveza **umbhalo** wengoma ethi, Lizalis' ngokwemigomo yokubhalwa komculo, kungaba yinto enjengalena:



Lokhu kubizwa ngokuthi yi-**4 time** ngoba kunezinhlamvu zo-q

EZINE kwibha ngayinye.

U-4 ubizwa **NGENKOMBASIGQI**,

ngoba usitshela ngokuhambangesigqi NANOKUTHI mingaki imigqigqo kwibha.

Ngaso sonke isikhathi, inkombasigqi iba ngaphambili komucu womculo. Isibonelo:



Qaphela ukuthi ibha ngayinye ihlanganisa imigqigqo emine yenothe elisigqisinye ku-4.

Isebenza kanjani inkombasigqi?

- Inombolo engaphezulu ikhomba ukuthi mingaki imigqigqo.
- Inombolo engaphansi ikhomba uhlobo lwenothi olusetshenziswayo.

Isibonelo:

4
4

Inombolo **engaphezulu** u-4 isitshela ukuthi ibha ngayinye inemigqigqo emine. Inombolo **engaphansi** yona isitshela ngamanothi asigqisinye asetshenziswayo. Ngakho-ke, ibha ngayinye inemigqigqo yenothi elisigqisinye emine.

QAPHELA: **inkombasigqi ayilona ucezu**; ngakho-ke, **akukho mugga** phakathi kwezinombolo!

OKUBALULEKILE

Inombolo engaphansi yenkombasigqi kuhlezi kuyinombolo yemigqigqo engangena khaxa enothini elizigqizine.

Inothi elizigqizine lidinga imigqigqo emingaki? **Emine.**

Ngakho-ke, uma inombolo engaphansi yenkombasigqi kungu-**2**, sithi: u-4 simhlukanisa **ngo-2** kwenza u-2.

Liyini inothi elinemigqigqo emibili? **Inothi elizigqimbili.**

Ngakho-ke, uma inombolo engaphansi kungu-2, sisebenzisa imigqigqo yenothi elizigqimbili kwibha.

Ake ukhumbule emuva, ngesikhathi siqala lesi sahluko lapho ufunde **ngomgqigqo nesigqi**. Imigqa emibili emele umgqigqo yahlukaniswa ngezigqi ezintathu (umugqa ongaphezulu), komunye umugqa ihlukaniswe ngezigqi ezimbili (umugqa engaphansi).

- Izinkombasigqi zingakhombisa lokhu kuhlukana komgqigqo.
- KHUMBULA: amaqoqo emigqigqo = ukuhambangesigqi.
- **Inhlukanakabili yomgqigqo** yezinkombasigqi imele imigqigqo ehlukaniseka ibe yizigqi ezimbili.
- **Inkombasikhathi engxube** yezinkombasigqi imele imigqigqo ehlukaniseka ibe yizigqi ezintathu.

Nazi ezinye izibonelo zenhlukanokabili yomgqigqo:





KHUMBULA: amaqoqo emigqigqo = ukuhambangesigqi. Qaphela ukuthi **umgqigqo** kulezi zinkombasigqi yinothi elisigqisinye elinedothi. Inothi elisigqisinye lihlukaniseka libe **yizingxenye zenothi elisigqisinye ezimbili**, ngakho-ke konke lokhu **KUSENHLUKANWENIKABILI YOMGQIGQO**.

Nazi ezinye izibonelo zenkombasikhathi engxube:



KHUMBULA: amaqoqo emigqigqo = ukuhambangesigqi. Qaphela ukuthi **umgqigqo** kulezi zinkombasigqi **yinothi elisigqisinye elinedothi**, nokwenza kulingane **nezingxenye zenothi elisigqisinye ezintathu**. Inothi elisigqisinye elinedothi lihlukaniseka libe **yizingxenye zenothi elisigqisinye ezintathu**, ngakho-ke konke lokhu **KUKWINKOMBASIKHATHI ENGXUBE**.

Uma ngabe izingxenye zenothi elisigqisinye zihlanganiswe zaba ntathu, lokho kukhombisa ukuthi into **ikwinkombasikhathi engxube**.

Ngesinye isikhathi, abaqambi kanye nabahleli bomculo bathanda ukuxuba ukuhambangesigqi okulula nokuthe ukuba lukhunyana ngenhloso yokwenza umculo unongeke. Ngamanye amazwi, kumucu womculo oyinhlukanakabili yomgqigqo, umqambi angafuna isigqi esisodwa sihlukaniseke kathathu, esikhundleni sokuhlukaniseka kabili. Ukubhalwa komculo kuyakuvumela lokhu kunongeka ngaphandle kokuthi kube nesidingo sokushintsha inkombasigqi. Nasi isibonelo:



Kwibha yesithathu, isigqi sokuqala nesesibili kufanele zihlukaniseke kathathu, kunokuthi zihlukaniseke ngale ndlela yazo eyejwayelekile yokuhlukaniseka kabili.

Lokhu kusho ukuthi kufanele ufake amanothi amathathu esikhaleni somgqigqo owodwa. Qaphela ukuthi izingxenye zenothi elisigqisinye ezintathu ezingena khaxa emgqigqweni owodwa zinabakaki nenombolo engu-3 encane ngaphezu kwazo. Nayi indlela yokubhala izigqintathu:

Umsebenzi owenziwayo

Zihlukaniseni ngamaqembu amathathu. Iqembu lokuqala kufanele liqale lishaye izandla ngemigqigqo yenothi elisigqisinye engashintshi. Iqembu lesibili lijoyina iqembu lokuqala, lishaya izigqi zengxenye yenothi elisigqisinye (enothini elisigqisinye ngalinye, iqembu lesibili lizongena ngezingxenye ezimbili zenothi elisigqisinye). Iqembu lesithathu lona-ke lizojoyina ekugcineni, lizoshaya izigqintathu zezingxenye zenothi elisigqisinye (enothini elisigqisinye ngalinye iqembu lesithathu lizoshaya izigqintathu zezingxenye zenothi elisigqisinye ezintathu).

Iqembu lokuqala $\frac{4}{4}$ 

Iqembu lesibili $\frac{4}{4}$ 

Iqembu lesithathu $\frac{4}{4}$ 

Uma ungenza lo msebenzi ngendlela eyiyo, umthelela ozokwenzeka uyisisekelo sezinhlobo eziningi zomculo wesintu walapha ekhaya. Empeleni, imicu yendidiyelosigqi enokubili encintisana nenokuthathu ijwayelekile ezinhlotsheni eziningi zomculo wase-Afrika.

Izigqintathu azisetshenziswa kuphela nje ezingxenye zenothi elisigqisinye. Noma yimaphi amaqoqo amanothi amathathu angaculwa esikhathini samanothi amabili angabhalwa njengezigqintathu. Isibonelo:

$$\overbrace{\text{♪ ♪ ♫}}^3 = \text{♪ ♪}$$

4

Ukuhlanganiswa kwamanothi abe ngamaqoqo

Esahlukweni esidlule, sifunde ukuthi ngokujwayelekile izindidiyelosigqi zihlezi zilandela indlela efanayo yokuba yizigqi eziphezulu nezigqi eziphansi. Ukwenza kube lula ukufunda izinhlobo zobungako benothi zihlukaniswa NGOKWEZINKOMBASIGQI ukuze abaculi babone kahle ukuhamba ngesigqi. Kuneminye futhi imithetho ebaluleke njengayo le, yona-ke isetshenziswa ukulekelela ekufundweni komculo. Le mithetho isingethe indlela amaqoqo amanothi nobungakosikhathi sokuthula ahlanganiswa ngayo ukuze ukwehlukaniswa okwejwayelekile KWENKOMBASIGQI kube lula ukubonakala ukuze iculo liculeke.

Umthetho wokuqala:

1. Kwinhlukanakabili yomgqigqo, imigqigqo ihlukana amaqoqo amabili. Isibonelo, esikhathini esiwu-4/4, lapho imigqigqo ingamanothi asigqisinye, izingxenyane zamanothi asigqisinye zihlanganiswa zibe ngamaqoqo amabili.



2. Kwinkombasikhathi engxube, imigqigqo ihlukana ibe ngamaqoqo amathathu. Isibonelo, esikhathini esiwu- P, lapho imigqigqo ingamanothi asigqisinye anamadothi, izingxenyane zenothi elisigqisinye zihlanganiswa zibe ngamaqoqo amathathu.



Nokho kukhona okuthathu okungangeni kulo mthetho:

Ukuhlanganiswa kwamanothi abe ngamaqoqo

- a. Esikhathini esiwu-2/4, izingxenye zenothi elisigqisinye ezine zingahlanganiselwa eqoqweni elilodwa.

Isibonelo:



- b. Esikhathini esiwu-3/4, izingxenye zenothi elisigqisinye eziyisithupha zingahlanganiselwa eqoqweni elilodwa.

- c. Esikhathini esiwu-4/4, izingxenye zenothi elisigqisinye ezine zingahlanganiselwa eqoqweni elilodwa, inqobo nje uma zingaweleli maphakathi nebha.

Isibonelo:



Umthetho wesibili:

Ngaso sonke isikhathi kufanele uhlanganise amanothi abe ngamaqoqo ukuze amele umgqigqo owodwa kwinkombasigqi.

Bheka isibonelo esilandelayo.

Buka ukuthi izingxenye zenothi elisigqisinye nezingxenyana zenothi elisigqisinye zihlanganiswe kanjani ndawonye ngokwemigqigqo.



Kwinkombasikhathi engxube, lokhu kungaba nzinyana, ngoba imigqigqo ingamanothi asigqisinye anamadothi.

Bhekisisa kahle lesi sibonelo esilandelayo ubone ukuthi amanothi ahlanganiswa kanjani.



Uma ngabe isibonelo silukhuni,

bhala uphawu lwenothi ngalinye ngaphansi noma ngaphezu kwalo, bese uqhubeka nazo izimpawu.

Kwinhlukanakabili yomgqigqo, amaqoqo amanothi kufanele alingane no-1.

Kwinkombasikhathi engxube, amaqoqo amanothi kufanele alingane no-1 ½.

Isibonelo:

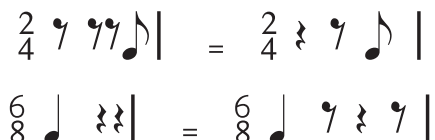


Impendulo kufanele ibukeke kanje:



Umthetho wesithathu:

Ubungakosikhathi sokuthula bulandela imithetho efanayo neyamanothi. Isibonelo:



Umthetho wesine:

Kwinhlukanakabili yomgqigqo,
 GWEMA ubungakosikhathi sokuthula obunamadothi.
 Kwinkombasikhathi engxube,
 ubungakosikhathi sokuthula kufanele bulandele le mithetho elandelayo:
 uma ngabe umgqigqo wonkana usesikhathini sokuthula, kufanele ube
 wubungakosikhathi sokuthula esinedothi,
 NOMA yinothi elisigqisinye lobungakosikhathi sokuthula lilandelwe yingxeny
 yenothi elisigqisinye lobungakosikhathi sokuthula (akufanele kuphambaniswe lokhu).
 Ngamanye amazwi, inothi elisigqisinye lilandelwa ingxeny yenothi elisigqisinye.
 Isibonelo:

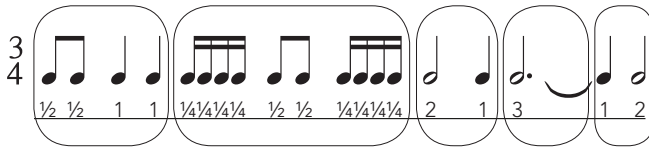


Umthetho wesihlanu:

Kwinkombasikhathi engxube,
 uma ingxeny yenothi elisigqisinye ingasekuqaleni komgqigqo,
 futhi uma ilandelwa ubungakosikhathi sokuthula emgqigqweni wonke;
 ubungakosikhathi sokuthula bengxeny yenothi elisigqisinye obubili kufanele
 kusetshenziswe, kunokusebenzisa ubungakosikhathi sokuthula benothi elisigqisinye.
 Lokhu kuhambisana nomthetho wesine – kwinkombasikhathi engxube,
 ubungakosikhathi sokuthula kufanele ngaso sonke isikhathi bulandele umthetho
 wesibili nowokuqala ngenhla.

Isingeniso Esiyisisekelo Emkhakheni Womculo

Isitebhu sesithathu: Faka izimpawu zamanothi ndawonye ukwenza amaqoqo alingane no-3.



Isitebhu sesine: Emuva kweqoqo ngeqoqo elakhiwe ngokuthathu, faka inhlukanisamgamu.



QAPHELA: Isihlanganisimanothi kwibha yesine sisadingeka empendulweni yakho yokugcina.

Nasi esinye isibonelo, kodwa kwinkombasikhathi engxube:



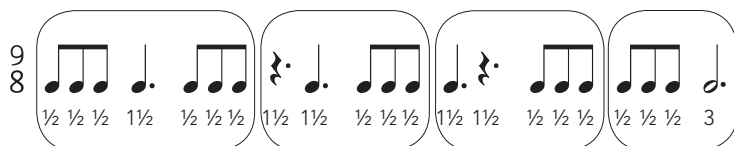
Landela izitebhu ezifanayo.

Isitebhu sokuqala: Enothini ngalinye noma kubungakosikhathi sokuthula bhala uphawu lwesikhathi.



Isitebhu sesibili: Bheka inkombasigqi. Kulesi sibonelo, sisebenza ngenkombasikhathi engxube (umgqigqo ngamunye uyinothi elisigqisinye elinedothi – lifanele u-1½). U-9/8 uyinkombasikhathi engxube ephindeke kathathu, okuchaza ukuthi inemigqigqo emithathu yenothi elisigqisinye elinedothi kwibha ngayinye (yingakho kuthiwa iphindeke kathathu). Ngamanye amazwi, ibha ngayinye ifanele imigqigqo ewu- 4½ (1½ + 1½ + 1½ = 4½).

Isitebhu sesithathu: Faka izimpawu zamanothi ndawonye ukwenza amaqoqo alingane no- $4\frac{1}{2}$.



Isitebhusesine: Emuva kweqoqongeqoqo elakhekengo- $4\frac{1}{2}$, faka inhlukanisamgamu.



Kungenzeka futhi uyalelwe ukuthi uthole inkombasigqi yebha noma yesiqeshana somculo. Lolu hlobo lo mbuzo lufana nse nalo mbuzo ongenhla. Nasi isibonelo esenziwe:



Isitebhu sokuqala: Enothini ngalinye noma kubungakosikhathi sokuthula, bhala uphawu lwesikhathi.



Isitebhu sesibili: Hlanganisa zonke izimpawu ndawonye.

$$\frac{1}{2} + \frac{1}{2} + 1 + 1\frac{1}{2} + \frac{1}{4} + \frac{1}{4} = 4$$

Lokhu kusho ukuthi kunezigqi ezine kwibha. Okwamanje, usafunde ngenkombasigqi eyodwa enezigqi ezine kwibha, okuyi- $4/4$ time!

Ngakho-ke, impendulo wu- $4/4$.



Lezi yizibonelo ezimbili zenkombasikhathi engxube:



Isitebhu sokuqala: Enothini ngalinye noma kubungakosikhathi sokuthula, nakhona bhala uphawu lwesikhathi.


1½ ½ ½ ½


1 ½ ½ ½ ½ 1 ½

Isitebhu sesibili: Hlanganisa zonke izimpawu ndawonye.

$1\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 3$

$1 + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + 1 + \frac{1}{2} = 4\frac{1}{2}$

QAPHELA: Kwizinkombasigqi u $\frac{3}{4}$ no $\frac{6}{8}$ amabha aphelele womabili alingana no- 3! Ungawubona kanjani umehluko? Ngendlela amanothi ahlanganiswe ngayo. Ku- $\frac{3}{4}$ amanothi ahlanganiswe ngamaqoqo amabili (♩), kanti ku- $\frac{6}{8}$ amanothi ahlanganiswe ngamaqoqo amathathu (♩).

Izimpendulo okuyizona yilezi:


 $\frac{6}{8}$


 $\frac{9}{8}$

Leli yitafula elikutshela ukuthi ibha ngayinye ilingana nani kwizinkombasigqi ezahlukene esizifundile:

Inkombasigqi	Igama lakhona	Imigqigqo kwibha ngayinye	Sekukonke kwibha ngayinye
$\frac{2}{4}$	Inhlukanakabili yomgqigqombili	2 ♩	2
$\frac{6}{8}$	Inkombasikhathi engxube yomgqigqo	2 ♩	3
$\frac{3}{4}$	Inhlukanakabili yomgqigqontathu	3 ♩	3
$\frac{9}{8}$	Inkombasikhathi engxube yomgqigqontathu	3 ♩	4½
$\frac{4}{4}$	Inhlukanakabili yomgqigqo omvomine	4 ♩	4
$\frac{12}{8}$	Inkombasikhathi engxube omvomine	4 ♩	6

Olunye uhlobo lombuzo ongabuzwa lona kungaba ukugcwalisa ibha ngobungakosikhathi sokuthula. Nazi ezinye izibonelo:



OKUBALULEKILE: kule mibuzo, akufanele ushintshe ukulandelana kwamanothi njengoba enikeziwe embuzweni.

Isitebhu sokuqala: Enothini ngalinye noma kubungakosikhathi sokuthula, bhala uphawu lwesikhathi.



Isitebhu sesibili: phelelisa yonke imigqigqo engaphelele. Khumbula, kwinkombasikhathi yomgqigqo ukuthi umgqigqo ufanele u-1, kanti kwinkombasikhathi engxube, umgqigqo ufanele u- 1½. Umgqigqo wesithathu awuphelele. Okwamanje kufanele u-½ nje kuphela. Ukuwuphelelisa, sidinga ukunezezela u- ½ wobungakosikhathi sokuthula (ingxenye yenothi elisigqisinye sobungakosikhathi sokuthula).



Isitebhu sesithathu: Faka noma yisiphi isigqi esigcwele esisasele. Kulesi sibonelo, inkombasigqi ithi sidinga imigqigqo emine kwibha ngayinye. Okwamanje sisenemithathu, ngakho-ke, sidinga inothi elisigqisinye lobungakosikhathi sokuthula ukugcwalisa ibha.



Nasi isibonelo kwinkombasikhathi engxube:



Isitebhu sokuqala: Enothini ngalinye noma kubungakosikhathi sokuthula, bhala uphawu lwesikhathi.



Isitebhu sesibili: Phelalisa yonke imigqigqo engaphelele. Khumbula, kwinkombasikhathini engxube ukuthi umgqigqo ufanele u- $1\frac{1}{2}$. Umgqigqo wesithathu awuphelele. Okwamanje ufanele u- $\frac{1}{2}$ nje kuphela. Ukuwuphelelisa, sidinga ukunezezela u- 1. Yilapho-ke inkombasikhathi engxube iba nzinyana. Uma usebenza ngobungakosikhathi sokuthula, kunomthetho esiwulandelayo obizwa ngo- $2 + 1$. Izinombolo zimele izingxenyane zenothi elisigqisinye, okuyizingxenyane zenothi elisigqisinye ezimbili (inothi elisigqisinye) nengxenyane yenothi elisigqisinye eyodwa (ingxenyane yenothi elisigqisinye): $\frac{1}{2}$ $\frac{1}{2}$. Kusebenza kanjani? Uma unenothi elisigqisinye (elifanele izingxenyane zenothi elisigqisinye ezimbili) zilandelwe ubungakosikhathi sokuthula, kungaba ingxenyane yenothi elisigqisinye (lifanele u-1) yobungakosikhathi sokuthula. KODWA uma unengxenyane yenothi elisigqisinye (lifanele u- 1) lilandelwe ubungakosikhathi sokuthula, ungelisebenzise inothi elisigqisinye lobungakosikhathi sokuthula (lifanele u- 2) ngoba lokho kungaba wu- $1 + 2$ esikhundleni sika- $2 + 1$. Esimweni esinjengalesi, sisebenzisa izingxenyane zenothi elisigqisinye zobungakosikhathi sokuthula ezimbili, isibonelo, $\frac{1}{2}$ $\frac{1}{2}$ hhayi $\frac{1}{2}$ $\frac{1}{2}$. Ngakho-ke, nayi impendulo okuyiyo:



Manje-ke, kufanele sizame ukwenza izibonelo zokuhlanganisa amanothi abe ngamaqoqo.



Isitebhu sokuqala: Enothini ngalinye noma kubungakosikhathi sokuthula, bhala uphawu lwesikhathi.



Isitebhu sesibili: Hlanganisa wonke amanothi ngamaqoqo ngokwemigqigqo. Kulesi sibonelo, sisebenza ngenhlukanokabili yomgqigqo. Khumbula ukuthi lokhu kusho ukuthi imigqigqo ifanele u- 1. Uma ngabe inothi lifanele umgqigqo ongaphezu kowodwa, libale bese usebenzisa umgqigqo osondelene nempendulo yakho.



Isitebhu sesithathu: Manje-ke, yenza amaqoqo amanothi ngendlela eyiyo.



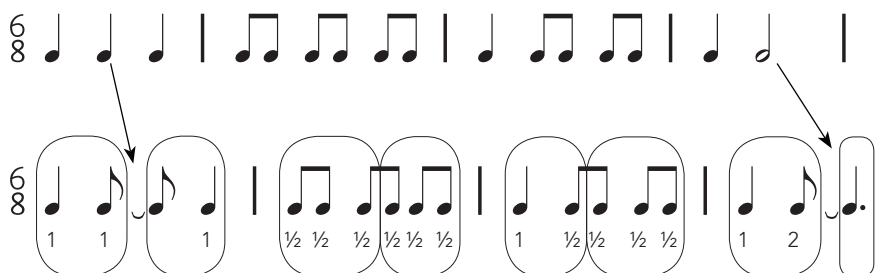
Nasi isibonelo kwinkombasikhathi engxube:



Isitebhu sokuqala: Enothini ngalinye noma kubungakosikhathi sokuthula, bhala uphawu lwesikhathi.



Isitebhu sesibili: kwinkombasikhathi engxube, futhi KWINKOMBASIKHATHI ENGXUBE KUPHELA, ubungako benothi bungahlukaniswa ukuze busebenze kahle ngokwemigqigqo. Khumbula, kwinkombasikhathi engxube ukuthi umgqigqo ufanele u- 1½. Khumbula futhi ukuthi noma ngabe amanothi uyawahlukanisa ukuze ahambisane nenkombasigqi, kufanele azigcine izimpawu zawo, ukuze usebenzise izihlanganisimanothi. Uma sewenze lokhu-ke, hlanganisa onke amanothi abe ngamaqoqo ngokwemigqigqo. Uma ngabe inothi lifanele umgqigqo ongaphezu kuka-1½, libale bese usebenzisa umgqigqo osondelene nempendulo yakho.



Isitebhu sesithathu: Hlanganisa ndawonye amanothi ngendlela eyiyo.



QAPHELA: Umthetho ka-2 + 1 awusetshenziswa emanothini, usetshenziswa kubungakosikhathi sokuthula kuphela!

Nasi esinye isibonelo kwinkombasikhathi engxube:

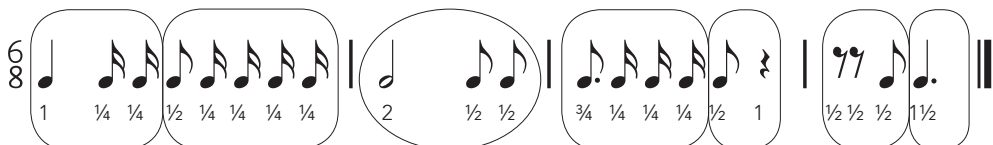


Qaphela inkombasikhathi. Iyinkombasikhathi engxube. Lokhu kuchaza ukuthi umgqigqo uyinothi elisigqisinye elinedothi (↓). Mibili imigqigqo yenothi elisigqisinye enedothi kwibha ngayinye. Inothi elisigqisinye elinedothi lifanele u-1 ½, futhi sizohlanganisa amanothi abe ngamaqoqo ngokwemigqigqo.

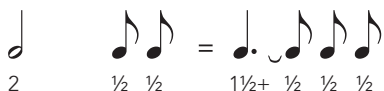
Isitebhu sokuqala: Bhala uphawu lwenothi ngalinye ngaphansi kwesibonelo.



Isitebhu sesibili: Hlanganisa wonke amanothi abe ngamaqoqo ngokwemigqigqo.



Qaphela ibha ekokolozelwe. Inkinga inothi elizigqimbili. Lesi sibonelo sikwinkombasikhathi engxube, ngakho-ke, imigqigqo ifanele u- 1½. Ngakho-ke, yonke into kufanele ihlanganiswe ibe ngamaqoqo kule migqigqo. Nayi indlela ibha yesithathu engaphinde ibhalwe ngayo futhi:



Lena yindlela okungahlanganiswa ngayo kube ngamaqoqo:



Isitebhu sesithathu: Hlanganisa ndawonye amanothi ngendlela eyiyo.



QAPHELA ukwenziwa kwamaqoqo obungakosikhathi sokuthula!

Khumbula umthetho ka- 2+1! La kunengxenywe yenothi (1) elisigqisinye eyodwa ekuqaleni komgqigqo. Lokhu kusho ukuthi kufanele ilandelwe izingxenywe zenothi elisigqisinye zobungakosikhathi sokuthula ezimbili.

Lapha, izingxenywe zenothi elisigqisinye zobungakosikhathi sokuthula ezimbili zingahlanganiswa (2).

Kwenzekani uma **inothi elinedothi** liphazamisa ukuhleleka kwemigqigqo ehlukana kabili noma kathathu?

Uwubona kanjani umehluko phakathi kuka-3/4 no-6/8?

Kunzima kwesinye isikhathi ukubona umehluko phakathi kuka-3/4 no-6/8. Ibha kwizinkombasigqi zombili ilingana no-3. Ku-3/4, kunemigqigqo yamanothi asigqisinye emithathu ($1 + 1 + 1 = 3$). Ku-6/8, kunemigqigqo emibili yamanothi asigqisinye anamadothi ($1\frac{1}{2} + 1\frac{1}{2} = 3$). Nazi izibonelo ezimbili ezikhombisa umehluko:

Isibonelo sokuqala: Ngabe le bha yamanothi iku-3/4 noma iku-6/8?



Imfihlo ekutholeni ukuthi iyiphi inkombasigqi okuyiyo ilele endleleni amanothi ahlangele ngayo aba ngamaqoqo. Uma ngabe isibonelo besiku-6/8, bekuzohlanganiswa kube ngamaqoqo kanje:

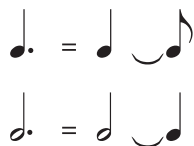


Amaqoqo amabili ezingxenywe ezintathu zenothi elisigqisinye (inothi elisigqisinye elinedothi libalwa njengeqoqo elilodwa lezingxenywe ezintathu zenothi elisigqisinye).

Isingeniso Esiyisisekelo Emkhakheni Womculo

Kodwa, ngoba izingxenye zenothi elisigqisinye zihlanganiswe zaba ngamaqoqo amabili esibonelweni sokuqala ngqa, empeleni ziku-3/4.

Kuyasiza ukubuka amanothi anamadothi njengenhlukanakabili yomgqigqo kanje:



Uma sibuyela kulesi sibonelo esingenhla bese sishintsha amanothi anamadothi abe ngamanothi amabili ahlange, nakhu esikutholayo:



Uma uhlanganisa amanothi uwenza amaqoqo, khumbula NGASO SONKE ISIKHATHI ukuthi kwinhlukanakabili yomgqigqo, umgqigqo uhlukana kabili, nokuthi kwinkombasikhathi engxube umgqigqo uhlukana kathathu.

Nasi isibonelo sesibili:

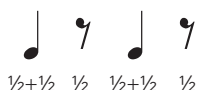


Uma sibhala ubungako bamanothi ngaphansi kwenothi ngalinye nakubungakosikhathi sokuthula, nakhu esikutholayo:

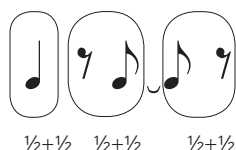


Konke lokhu kulingana no-3. Manje-ke, buza lo mbuzo: NGABE AMANOTHI ANGAHLANGANISWA YINI ENZIWE AMAQOQO AMABILI EZINGXENYENI EZIMBILI ZENOTHI ELISIGQISINYE NOMA EZINGXENYENI EZINTATHU ZENOTHI ELISIGQISINYE?

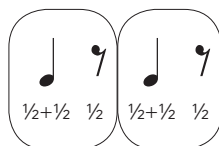
Ake sibone-ke uma ngabe amanothi, njengoba ekulesi simo akuso, angahlanganiseka yini abe ngamaqoqo amabili. Khumbula, inothi elisigqisinye lifanele izingxenye ezimbili zenothi elisigqisinye.



Uma sibhekisisa kahle lokhu ekade sikubheka ngenhla, indlela amanothi abukeka ngayo ikhomba ukuthi NGEKE ahlanganiswe enziwe amaqoqo amabili. Inothi elisigqisinye lesibili belingadinga ukuhlukaniswa libe nguqhafu ukuze amanothi ahlanganiseke abe ngamaqoqo amabili. Ukube amanothi avumile ukuhlanganiseka aba ngamaqoqo amabili, bekuzobukeka kanje:



Njengoba ekulesi simo akuso amanothi, ake sibheke-ke manje ukuthi angavuma yini ukuhlanganiseka abe ngamaqoqwana amathathu:



Njengoba ubona, amanothi ANGAHLANGANISEKA enziwe amaqoqo amathathu NGAPHANDLE kokushintsha indlela abukeka ngayo. Ngakho-ke, lesi sibonelo siwu-6/8.

IMITHETHO YOKUBHALA IPHIMBO

Yini IPHIMBO, futhi yini ISIVININIMAZAMSINDO?

Izahluko zokuqala ezine zale ncwadi zimayelana nemithetho yokubhalwa kwendidiyelosigqi. Sifundile ukuthi indidiyelosigqi yisikhathi esithathwa wumsindo womculo nokuthi futhi izindidiyelosigqi zingahlelwa ngezindlela ezithize. Manje-ke sesiqhubekela phambili, sibheka olunye uhlangothi olubalulekile emsindweni womculo: iphimbo. Iphimbo-ke yilapho kubhekwa khona ukuthi inothi lo mculo liphakeme noma liphansi kangani. Ake ucabange ngabaculi babantu abadala. Ngokujwayelekile, amazwi abantu besifazane ahlukane ngezigaba ezimbili; yindlela yokuqala nendlela yesibili. Abacula indlela yokuqala bangacula amanothi aphakeme kunalabo abacula indlela yesibili, kodwa abacula indlela yesibili bangafinyelela emanothini aphansi okuyinto abacula indlela yokuqala abangeke bakwazi ukuyenza.

Ngokufanayo, umculo wabadala besilisa uvamise ukuhlukaniseka izigaba ezimbili; ithuba nebhesi. Abacula ithuba bangacula amanothi athe ukuphakama (kodwa ngokujwayelekile hhayi aphakeme njengalawo aculwa abendlela yokuqala noma abendlela yesibili), kanti abebhesi bona bangafinyelela emanothini aphansi kakhulu.

Ngakho-ke, indlela umuntu acula ngayo iya ngokuthi angaculela phezulu noma phansi kangakanani. Uma sisebenzisa ulimi lwakhona, bacula ngendlela evumelana NAMAPHIMBO abo. Izinhlelonsimbi ezifana nophiyano nazo zinezinhlobo eziningi zamaphimbo ezingawadlala, kusukela kwaphansi kuya kwaphezulu. Uma ubheka uqwembezinkinobho lophiyano, amanothi aphansi kunawo wonke angasesandleni sokunxele, kanti amanothi aphezulu wona angasesandleni sokudla.

Iphimbo lenzeka uma ngabe izinto ezimbili zishayisana, noma uma uhlelonsimbi lushayisana nokuthile, noma uma ikholamu yomoya idlidlizele ngandlela thize. Kumculi, iphimbo lenzeka ngesikhathi izitho zezwi zishayisana. Kodlala *umakhweyana*, iphimbo lenzeka uma oculayo eshaya izintambo ngophephesimhlanga. Kodlala umtshingo, umoya odlidlizele emtshingweni wenza umsindo osamculo. Nokho umsindo uyenzeka, empeleni nje iphimbo LINGAMAZA OMSINDO. Inothi elingashintshi lomculo othize lingamaza omsindo. ISIVININIMAZAMSINDO itemu lesayensi elisetshenziswa ukukalwa kwamaza omsindo. Isivininimazamsindo sikalwa ngama- Hertz (ngokujwayelekile, afinyezelwa ku-Hz). Ekubhalweni komculo, asigxili kakhulu esivininimazamsindo, kodwa sigxila kwiphimbo.

Incazelo yetemu; iphimbo lomculo

Iphimbo ikhwalithi eyenza sikwazi ukwehlukanisa imisindo
'ephezulu' noma 'ephansi'
ngokwezimvunge zomculo noma ngokwezimvumelwanozindlela.

5

Ukubhalwa kwephimbo

Njengolimi, umculo unezinhlamvu, nhlanhla leyo ezimfushane kakhulu. Nazi izinhlamvu zomculo:

A B C D E F G

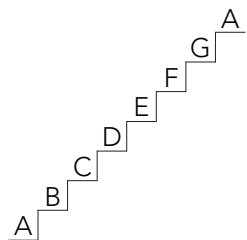
Zisebenza kanjani izinhlamvu zomculo?

Ngaso sonke isikhathi uma sesifike ekugcineni kokulandelana kwezinhlamvu emanothini kusukela ku-A kuya ku-G, sibuyela emuva, sibhale lolu hlamvu olusekuqaleni; kanje:

A B C D E F G A B C D E F G A B C . . .

Umsebenzi owenziwayo

Ake ucabange kunesitezi esinenothi elilodwa esitebhini ngasinye, kanje:



Kodwa-ke le nto isebenza kanjani, njengoba izinhlamvu ezifanayo zizolokhu zivelile, ziphinde zivele futhi? Uqinisile lapho! Yilapho-ke isithombe isitebhisi siwusizo kakhulu. Izinhlamvu zomculo zimele okuthile kwekhethelo kwephimbo okubizwa NGESIKHAWUNOTHIKUGCINA. Leli gama isikhawunothikugcina (octave) lisuselwa

esiqalweni 'oct-', okuchaza okuwu- 8. Ezinhlamvini zomculo wonke amanothi esi-8 awuhlamvu olufanayo. Isibonelo, asiqale sibale kusuka ku-C size sifike ku-8:

Uma sibheka ezitebhisini, mhlawumbe lokhu kuzozwakala kangcono:

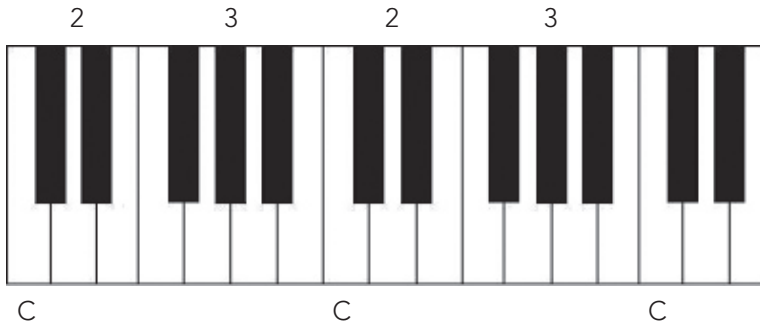
Qaphela ukuthi u-C wesibili **ungaphezulu** ngisho uwubuka kunalowo wokuqala. Uma ulalela ngaphandle kwesikhawunothikugcina, uzobona ukuthi bazwakala ngendlela efanayo, ukuba phezulu noma ukuba phansi. Lokhu kwenziwa wukuthi izivininimazamsindo zamanothi amabili ngaphandle kwesikhawunothikugcina zihlobene kakhulu. Inothi eliphezulu lesikhawunothikugcina liwuhhafu ngqo wengaphansi lwesivininimazamsindo senothi. Ngokufanayo, isivininimazamsindo senothi eliphansi kwesikhawunothikugcina liphindeke kabili kwingaphezulu lobungako benothi. Isibonelo:

U-A ungu-440 Hz maphakathi nophiyano.
U-A ongaphezu kuka-A omaphakathi ngu-220Hz.
U-A ongapansi kuka-A omaphakathi ngu-880Hz.

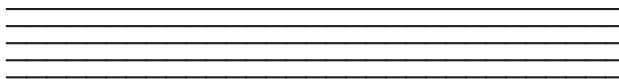
Ake uzame ukucula inothi eliphansi bese kuba yisikhawunothikugcina ngaphezu kwalo.

Ngamehlo engqondo, ukubuka izinhlamvu zomculo oqwembenizinkinobho zephiyano kungasiza. Nasi isithombe soqwembhezinkinobho zephiyano, kanti futhi zinamagama amanothi abhaliwe khona oqwembenizinkinobho.

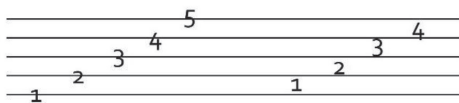
Uzokuqaphela ukuthi kunamanothi amhlophe kanye namanothi amnyama. Amanothi amhlophe kuphela abhalwe amagama kulesi sibonelo. Sizofunda ngamanothi amnyama esahlukweni esilandelayo. Okwamanje, qaphela ukuthi amanothi amnyama asemaqoqweni ahlukeni ka-2 no-3. Ngaso sonke isikhathi, u-C ungamthola ngo-: 1) ubeke iqoqo lamanothi amnyama amabili, ngo-2) uqala ngenothi elimhlophe uze ufinyelele ngasesandleni sokunxele senothi lokuqala elimnyama. Uma usumtholile u-C , usungathola-ke namanye amanothi.



Siwabhala kanjani amaphimbo ukuze izinhlamvu zamagama ezahlukene kanye nokwehlukana kwezikhawunothikugcina zibhaleke ngendlela eyiyo? Eminyakeni engamakhulu eminingi, intshonalanga yaqhamuka nohlelo lokubhalwa kwephimbo esethini yolayini abahlanu ababhekene futhi abavundlile ababizwa ngokuthi WUHLAKA LOBHALOMCULO. Umculo wasentshonalanga ubuye ubizwe NGOKUBHALWA KOHLAKA LOBHALOMCULO. Ulayini ngamunye kanye nezikhala eziphakathi kolayini zimele inothi elithize.



Uhlaka lobhalomculo LINOLAYINI NEZIKHALA.



Isingeniso Esiyisisekelo Emkhakheni Womculo

Olayini nezikhala zohlaka lobhalomculo azisho lutho ngaphandle kwezimpawu ezibaluleke kakhulu ezibizwa ngokuthi **IZINKOMBANOTHI**. Inkombanothi yenza izincazelo zolayini nezikhala 'zizwakale'. Zintathu izinkombanothi ezivamise ukusetshenziswa ekubhalweni kohlaka lobhalomculo:

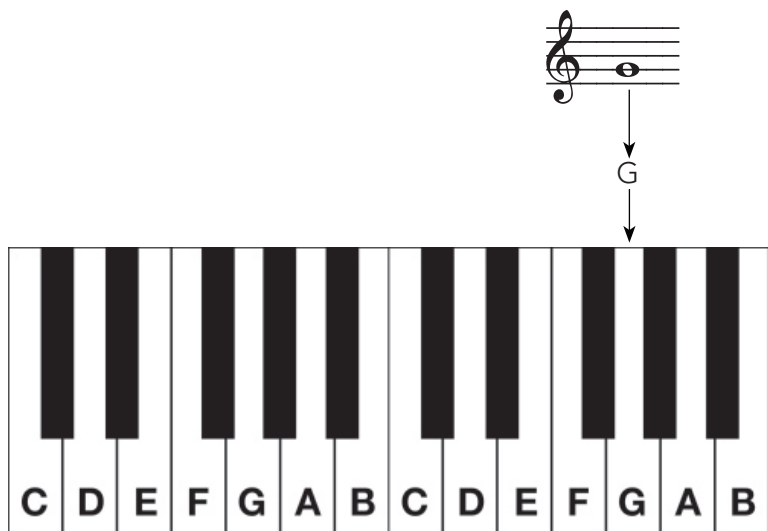


Njengoba kuvame ukusebenzisa izinkombanothi ezimbili nje, yizona-ke nathi esizofunda ngazo.

INKOMBANOTHI YAMAPHIMBO APHEZULU, ebuye ibizwe nge-*G-clef*, ivamise ukusetshenziswa emanothini aphezulu. Uma ubhekisisa inkombanothi yamaphimbo aphezulu, ungabona ukuthi kwakungu-G ongusonhlamvukazi obhalwe ngokuhlanganisa:

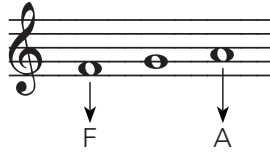


Uma **INKOMBANOTHI YAMAPHIMBO APHEZULU** isetshenziswe ohlakeni lobhalomculo, yenza ulayini wesibili osuka maphansi ube yinothi u-**G**. Akuwona nje noma yimuphi u-G, ngu- G maphakathi nophiyano.

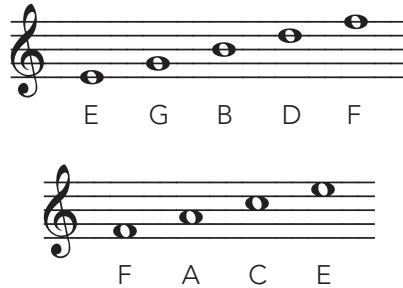


Isikhawunothikugcina esimaphakathi nophiyano

U-**G** wuhlamvu olusekugcineni ezinhlamvini zomculo, ngakho-ke, isikhala esiphezulu nje kancane kulayini wesibili yinothi u-**A**. U-**F** wuhlamvu olungaphambi kuka-**G**, ngakho-ke, isikhala esingaphansi nje kancane kulayini wesibili yinothi u- **F**. Ungathola nabanye olayini nezikhala ngokusebenzisa le ndlela.



Nawo-ke wonke amanothi ohlakeni lobhalomculo namagama akhona ebhaleke kahle:



Kunezimvumelwano ezilekelela ukufundwa kwamanothi. Kolayini (kusukela phansi):

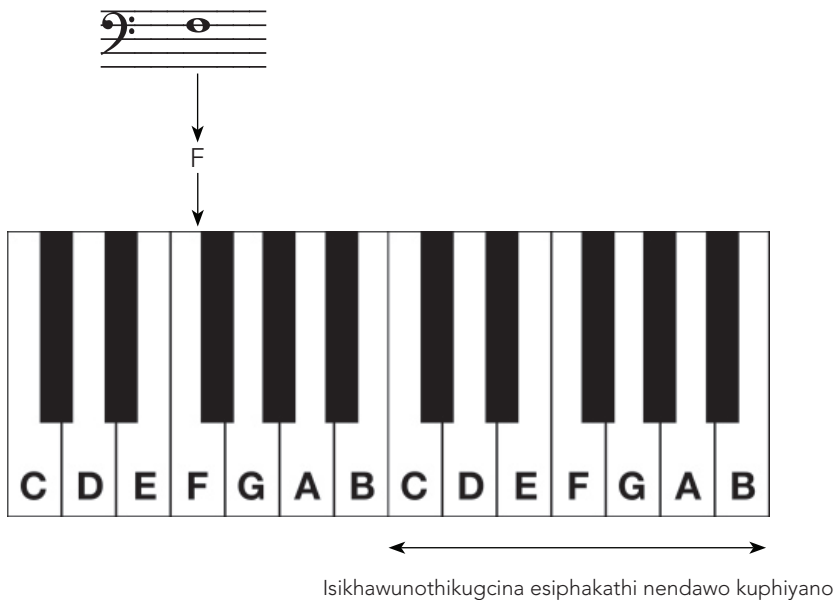
Every Good Boy Deserves Food

Izikhala (kusukela phansi) zipela 'u-face' ☺

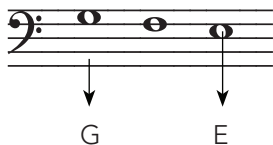
INKOMBANOTHI YEBHESI, ebuye yaziwe ngele-F-*clef*, ivamise ukusetshenziswa emanothini aphansi. Uma usebenzisa amehlo engqondo, ungabona ukuthi inkombanothi yebhesi yayikade ibhalwe ingusonhlamvukazi u-F obhalwe ngokuhlanganisa lapho olayini ababili abaqondene futhi bevundile sebasuswa:



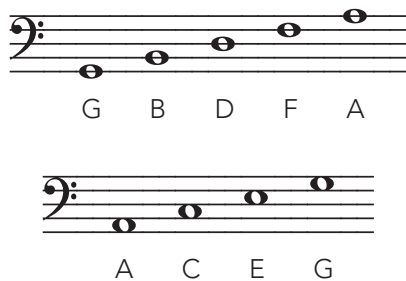
Uma inkombanothi yebhesi isetshenzisiwe ohlakeni lobhalomculo, yenza ulayini wesine kusukela **phansi** enothini u-**F**. Akuyena nje noma yimuphi u-F, u-F osesikhawunothikugcina ngaphansi nje kwesikhawunothikugcina esiphakathi nendawo kuphiyano.



Igama lohlamvu emuva kuka-**F** u-**G**, ngakho-ke, isikhala esingaphezudlwana nje kulayini wesine yinothi u-**G**. U-**E** wuhlamvu olungaphambi kuka-**F**, ngakho-ke, isikhala esingaphansi nje kulayini wesine yinothi u-**E**. Ungathola-ke abanye olayini nezikhala ngokusebenzisa le ndlela.



Nawo-ke wonke amanothi ohlakeni lobhalomculo namagama akhona ebhaleke kahle:



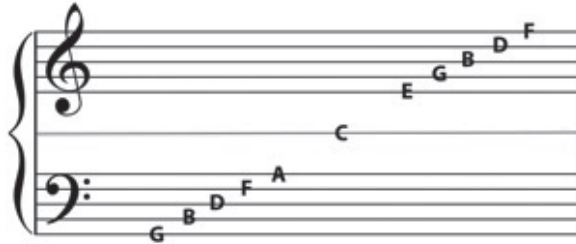
Futhi kunezimvumelwano zenkombanothi yebhesi, kolayini kusukela ngaphansi:

Good Boys Deserve Food Always

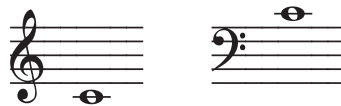
Izikhala kusukela ngaphansi:

All Cows Eat Grass

Kwesinye isikhathi, izinhlaka zobhalomculo ezimbili noma ngaphezulu ziyahlanganiswa. Isibonelo, emculweni wephiyano kuvamise ukuba nezinhlaka zobhalomculo ezimbili, inkombanothi yamaphimbo aphezulu yamanothi azodlalwa ngesandla sokudla (amanothi aphezulu) nenkombanothi yebhesi yamanothi azodlalwa ngesandla sobunxele (amanothi aphansi). Uma izinhlaka zobhalomculo zihlangene kanje, zibizwa ngokuthi UNHLAKAMBILI WOKUBHALELA UMCULO.

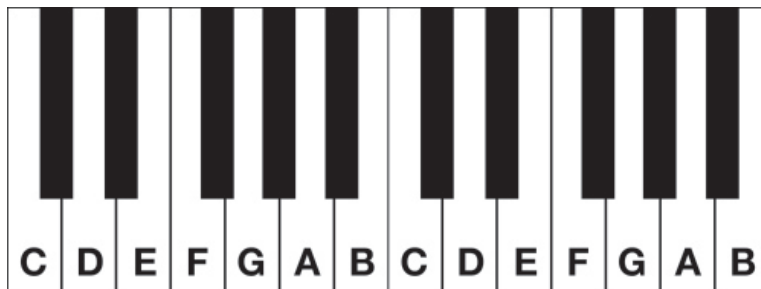


Qaphela ukuthi kulesi sithombe kunomugqa obhalwa ube bomvu omele inothi u-C. Lo-C thizeni ubizwa ngo-C OPHAKATHI NENDAWO, ngoba u-C ophakathi nendawo impela nohlaka lobhalomculo FUTHI ophakathi nendawo oqwembenizinkinobho zaphiyano. U-C ophakathi nendawo ubukeka kanjena-ke uma uwubhala kumaphimbo aphezulu nakwizinkombanothi zebhesi:



Qaphela ukuthi kwinkombanothi yamaphimbo aphezulu, u-C ophakathi nendawo ungaphansi impela futhi unolayini omncane kuwo. Lo layini ulinganisene nolayini bohlaka lobhalomculo. Kwinkombanothi yebhesi, u-C ophakathi nendawo ungaphezulu impela. Nawo lo-C futhi unolayini omncane kuwo.

Ngesikhathi sisasiqala lesi sahluko, sifundile ngezikhawunothikugcina. Sibonile futhi ukuthi uqwembezinkinobho lwephiyano lunamanothi amnyama namhlophe. Bhekisisa lolu qwembezinkinobho lwephiyano bese ubala ukuthi mangaki amanothi amnyama FUTHI mangaki namhlophe kwisikhawunothikugcina (qala ohlamvini luka-C bese-ke uqhubeka uze ufike ku-B).



Asethembe impendulo oyitholile yi-12! Kuyobe uqaphelelise kakhulu okwamanje: Ziyisi-7 kuphela izinhlamvu zamagama amanothi (A B C D E F G), kodwa amanothi wona ayi-12! Siwabiza ngani-ke la manothi ayisi-5 asele?

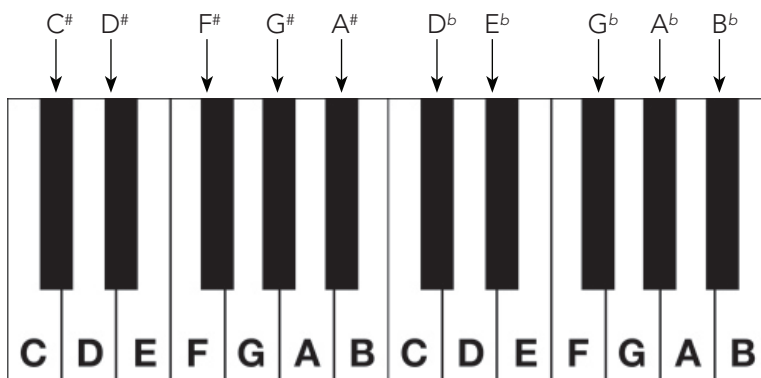
Yilapha-ke okufanele khona sethule izimpawu ezimbili ezibalulekile: u-# no-b

Uphawu OLUWUNYUSANOTHI (oluthi malubukeke kancane njengehash tag), LUKHUPHULA inothi elimhlophe ngesitebhu esisodwa.

Uphawu LWEHLISANOTHI (oluthi malubukeke kancane 'njengo-b'), LWEHLISA inothi elimhlophe ngesitebhu esisodwa.

Lezi zimpawu zibizwa ngokuthi NGAMANOTHIPHUTHA noma NGAMANOTHIMPAZAMO.

Lesi sibonelo esilandelayo sikhombisa ukuthi lokhu kusho ukuthini:



Ukubhala / ukukhuluma ngamanothiphutha

Uma ubhala noma ukhuluma ngenothiphutha kwiphrozi, beka uphawu EMUVA kwegama lenothi.

Isibonelo:

U-F[#] *noma* inyusanothi u-F

U-B^b *noma* ihlisanothi u-B

Uma ubhala inothiphutha,
Beka uphawu NGAPHAMBI kwenothi.

Isibonelo:



Kungenzeka usubonile ukuthi kunento ebalulekile ngesikhathi ubheka isibonelo, sephuthanothi ngenhla, ukuthi amanothi kuyenzeka abe namagama angaphezu kwelilodwa! Isibonelo, u- C[#] angabizwa futhi ngo-D^b– inothi elimnyama phakathi kuka-C no-D liwu- C[#]no-D^b. Lokhu kuyenzeka kuwo wonke amanothi amnyama futhi, empeleni, kuyenzeka nasemanothini amhlophe. Ekuhlolweni ngomculo, kungathiwa nikeza okufana NENOTHIMPAWUMBILI lenothi elithize. Lokhu kuchaza ukuthi kufanele unikeze elinye igama lenothi. Isibonelo, ake ubheke inothi elimnyama phakathi kuka-G no-A. Uma umbuzo udinga wena ukuthi unikeze okufana nenothimpawumbili lika-G[#] (ukukhuphuka kusuka ku-G), impendulo kungaba ngu-A^b (isigaba esehlayo kusuka ku-A).

Kwamanye amanothi amhlophe, kulula ukuthola okufana nenothimpawumbili. Uma ubhekisisa uqwembезинкнобо lwephiyano, uzobona ukuthi alikho inothi elimnyama phakathi kuka-E no-F. Ngakho-ke, u- E[#] (ukukhuphuka ngesitebhu esisodwa kusuka ku-E) uyinothi elimhlophe u-F! Ngokufanayo, u-F^b (ukwehla ngesitebhu esisodwa kusuka ku-F) ungu-E! Kukhona amanye amanothi amabili angenalo inothi elimnyama phakathi nawo. Ungazama yini ukuthola okufana namanothimpawumbili?

Kukhona ezinye izimpawu zamanothiphutha ezimbili ezingavamisile ukusetshenziswa njengeniyusanothi nehlisanothi: u-~~x~~ no-~~bb~~

Uphawu LWENYUSANOTHI OLUYIMPINDA (olubukeka 'njengo-'x') LIKHUPHULA inothi ngezitebhu ezimbili.

Uphawu LWEHLISANOTHI OLUYIMPINDA (olubukeka njengezimpawu ezimbili ezehlile ezisondelene impela nje) LWEHLISA inothi ngezitebhu ezimbili.

Isibonelo, u-C~~x~~ uphinde abe yinothi u-D. Ngamanye amazwi, okufana nenothimpawumbili kwenothi u-D kungaba yinyusanothi eliyimpinda u- C.

Uwadweba kanjani amanothiphutha?

Kumanyusanothi:

Dweba olayini ababili abaqondene ababheke phezulu
bese ubafaka abanye ababili abaqondene abavundlile
ukwenza ibhokisi elincane.

OKUBALULEKILE: ingxenye yebhokisi lenyusanothi KUFANELE lidwetshwe
kulayini NGQO noma esikhaleni senothi layo.

Kumahlisanothi:

Dweba 'u-b',

KODWA yenza ingaphezulu lwengxenye esandingilizi lithi ukuvela kancane.

OKUBALULEKILE: ingxenye esandingilizi 'ka-b' KUFANELE idwetshwe
kulayini NGQO noma esikhaleni senothi layo.

Nayi indlela okuyiyo yokubhala u-F oyinyusanothi:



Qaphela ukuthi ingxenye yebhokisi lenyusanothi liphakathi
nendawo kulayini ka-F.

Nazi izindlela ezimbili OKUNGEZONA ezokubhala u-F oyinyusanothi:



Qaphela esibonelweni sokuqala, ibhokisi empeleni lisesikhaleni sika-G.
AKUYONA indlela efanele le.

Esibonelweni sesibili, inyusanothi lisemgqeni ofanele,
kodwa lisemuva kwenothi, esikhundleni sokuba ngaphambi kwenothi. Nakho
futhi lokhu AKUYONA indlela efanele.

Ahlala isikhathi esingakanani amanothiphutha?

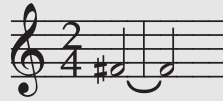
Inothiphutha (u-#b) lihlala kulayini ofanayo noma esikhaleni esifanayo kuze
kuba lisuswa olunye uphawu,
noma lihlale isikhathi sebha.

Uma inothi elifanayo liqhamuka kwibha eyodwa, inothiphutha lizoba
nomthelela futhi kulo.



Esibonelweni esingenhla, u-F wesibili nawo unyukile,
kodwa owesithathu AWUNYUKILE ngoba ukwibha entsha.

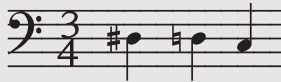
Uma amanothi amabili nangaphezulu ehlanganiswe ngethayi, inothi phutha
elisenothini lokuqala liba nomthelela kuwo wonke lawo manothi
elihlanganiswe nawo, isibonelo:



U-F kwibha yesibili naye unyukile ngoba uhlangene no-F oyinyusanothi
kwibha eyedlule.

Uphawu lwakhona

Uphawu lwakhona lukhipha inyusanothi noma ihlisanothi.



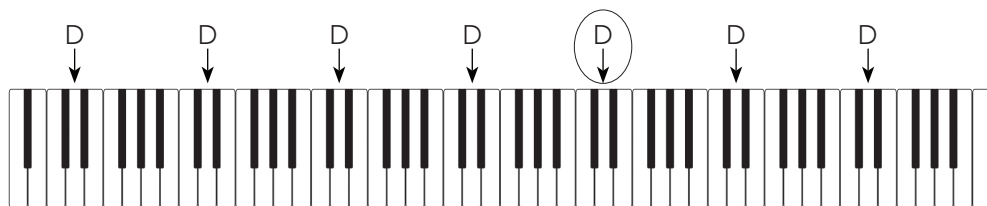
Kunephuzu okufanele siligcizelele ngaphambi kokuqhubekela phambili:

Inothi ohlakeni lobhalomculo limela iphimbo elithize. Isibonelo:



Leli nothi liwu-D. Akuyena noma yimuphi u-D nje, kodwa ngu-D othize ngokuhlelwa
kwamaphimbo.

Uma sibheka lonke uqwembezinkinobho zephiyano, kuno-D abayisi-7 sebebonke.

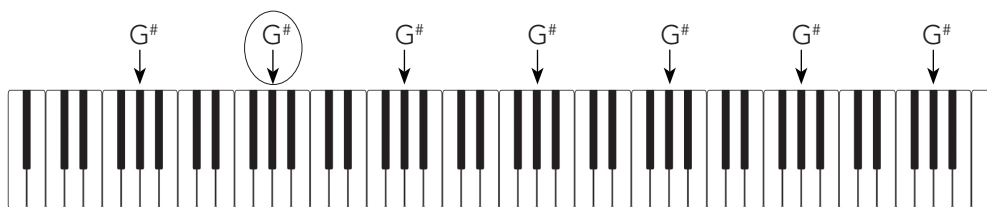


U-D ozungeziwe ngenhla yiwona lo obhalwe kwinkombanothi yamaphimbo aphezulu.

Nasi esinye isibonelo:

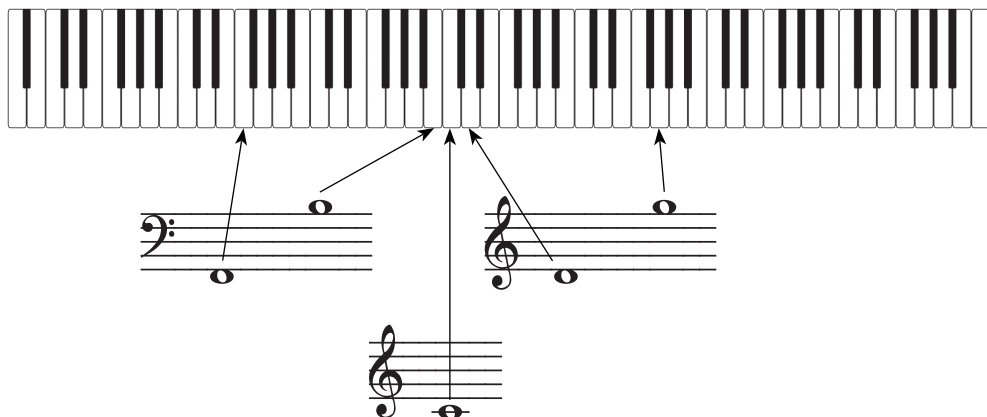


Lona ngu-G#. Bakhona futhi abanye o-7 G# kuqwembezinkinobho zephiyano.



U-G# ozungeziwe ngenhla yiwona obhalwe kwinkombanothi yebhesi.

Mhlawumbe ubonile ukuthi inkombanothi yamaphimbo aphezulu nenkombanothi yebhesi zihlangene zingakwazi ukwamukela isibalo esincane samanothi kuphiyano kolayini abahlanu nezikhala ezine (isithupha ngempela) ngokulandelana.



Kwenzekani uma ufuna ukubhala inothi eliphezulu noma eliphansi kunolayini nezikhala zohlaka lobhalomculo?

Ngenhlanhla, impendulo ithi mayibe lula: uvele nje ulule uhlaka lobhalomculo! U-C ophakathi nendawo empeleni uyisengezo sohlaka lobhalomculo. Lezi zengezo zibizwa ngokuthi IMIGQAKUXHUMA. Imigqakuxhuma ilandela imithetho ethize. Ake sibheke izibonelo ezithize:

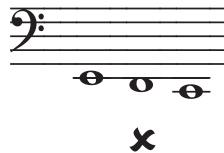
Lawa ngamanothi athize aphantsi kakhulu kwinkombanothi yebhesi, aba ngaphansi kohlaka lobhalomculo:



Ungazama ukuthola ukuthi yimaphi amagama amanothi?

Uma usuwatholile, qaphelisisa ukuthi abhalwa kanjani. Nayi eminye yemithetho ebalulekile yokubhalwa kwemigqakuxhuma:

1. Qaphela ukuthi imigqakuxhuma ayeqeli enothini ngalinye. Ngamanye amazwi, imigqakuxhuma **ayixhumani** ukwenza ulayini owodwa owengenziwe wohlaka lobhalomculo. Isib.



2. Bheka inothi lesibili. Uyabona ukuthi lingaphansi komugqakuxhuma? Uma sibhala amanothi ANGAPHEZULU noma ANGAPHANSI komugqakuxhuma, **asiwengezi** umugqakuxhuma ukuze kubukeke sengathi inothi lisesikhaleni.



6

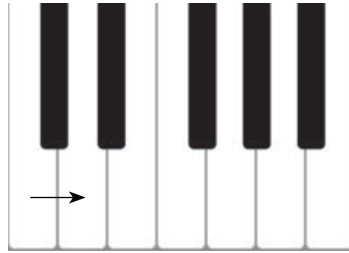
Imsindolibanga, izigamumsindolibanga nezikhawumsindo

Esahlukweni sesihlanu, sifunde ngokuthi amanothi amnyama namhlophe kwisikhawunothikugcina ayi-12 esewonke. Ibanga lomculo kwiphimbo **liyalingana** phakathi kwenothi nenothi ngalinye ayi-12. Ibanga eliphakathi kwenothi elilodwa neliseduze kwalo silibiza (isib. C to C[#]) NGESIGAMUMSINDOLIBANGA. Ngakho-ke, kunezigamumsindolibanga eziyi-12 kwisikhawunothikugcina.



Kunezinhlobo zomculo ezisebenzisa izikhawumsindo zephimbo ezincane kunezigamumsindolibanga. La mabanga amancane abizwa ngokuthi ngama*quartert*ones noma ngama*micro*tones. Isibonelo, umculo wase-Arab nowaseNdiya usebenzisa lezo zikhawumsindo. Okunye okubi ngohlelo lokubhalwa kohlaka lobhalomculo wukuthi aluzivumi kalula lezi zikhawumsindo ezincane, njengoba lwenzelwe izigamumsindolibanga. Nokho abaqambi bomculo besimanje abekade befuna ukusebenzisa ama*quartert*ones emculweni wabo sebeqhamuke nezimpawu ezihambisana ngqo nalolu hlelo. Ngesizathu sokuthi lezo zimpawu azisetshenziswa isikhathi esiningi, kanti futhi azikaphasiswa ngokusemthethweni, asizukufunda ngazo njengamanje.

Ibanga lezigamumsindolibanga ezimbili kuthiwa WUMSINDOLIBANGA. Isibonelo, u-C kuya ku-D kuqwebhezinkinobho lwephiyano wumsindolibanga.



Ikhono elibalulekile wukukwazi ukubhala nokuzwa imsindolibanga nezigamumsindolibanga.

Umsebenzi owenziwayo

Zama ukucula lezi zibonelo ezimbili. Esokuqala siwumsindolibanga emine ekhuphukayo iphinde yehle futhi; isibonelo sesibili-ke sona siyizigamumsindolibanga ezine ezikhuphukayo ziphinde zehle.



Esibonelweni sesibili, qaphela ukuthi amanathiphutha asebenza kanjani. Emuva kuka-D# kuza u-D onguphawumvelo. Uphawu oluyimvelo lwehlisa u-D# oyisigamumsindolibanga oyedwa. Emuva kuka-D owuphawumvelo, kuba yilokhu okubukeka kuwu-C wophawumvelo. Kodwa-ke empeleni wu-C# ngoba uphawu lwenyusanothi kusuka ekuqaleni alisuswanga wuphawu oluwuphawumvelo.

Ukubhala imsindolibanga nezigamumsindolibanga kungathi makube nzinyana. Nazi ezinye zezibonelo ukuze nawe ubone ukuthi ungazenzela kanjani:

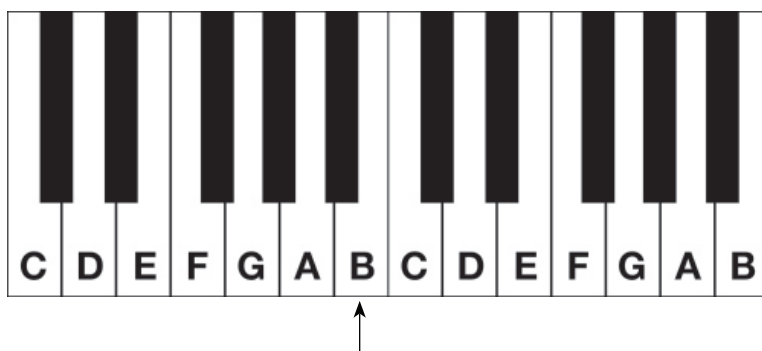
Isingeniso Esiyisisekelo Emkhakheni Womculo

Bhala inothi isigamumsindolibanga esisodwa SIBE PHEZULU kunenothi elinikeziwe.
Sebenzisa ubungako benothi obufana nobenothi elinikeziwe.



Isitebhu sokuqala: thola inothi elinikeziwe. Kulokhu, wu-B.

Isitebhu sesibili: thola inothi kuqwembezinkinobho lwephiyano noma esithombeni soqwembezinkinobho lwephiyano.



Isitebhu sesithathu: umbuzo udinga isigamumsindolibanga ESIPHEZULU, ngakho-ke, bala uqhubeke kusuka esitebhini sokuqala ku-B. Kulokhu, inothi wu-C.

Isitebhu sesine: umbuzo udinga ukuthi usebenzise ubungako benothi OBUFANAYO nalobu benothi elinikeziwe (ingxenywe yenothi elisigqisinye), ngakho-ke, yenza isiqiniseko sokuthi ubhala iphimbo okuyilo KANYE nesikhathi esilithathayo.



Manje, ake sizame futhi umbuzo ofanayo, kodwa onokukodwa okuhlukile okubalulekile.

Bhala inothi isigamumsindolibanga SIBE PHANSI kunenothi elinikeziwe.
Sebenzisa ubungako benothi obufanayo nobenothi elinikeziwe.



Isitebhu sokuqala nesesibili: zizofana ncamashi nokungenhla.

Imsindolibanga, izigamumsindolibanga nezikhawumsindo

Isitebhu sesithathu: umbuzo udinga isigamumsindo ESIPHANSI, ngakho-ke, bala WEHLE esitebhini sokuqala kusuka ku-B. Kulokhu, inothi wu-B^b noma okufana nenothimpawumbili lawo u-A[#]. Ungasebenzisa noma yigama lenothi kule mpendulo.

Isitebhu sesine: siyafana nalokhu okungenhla.



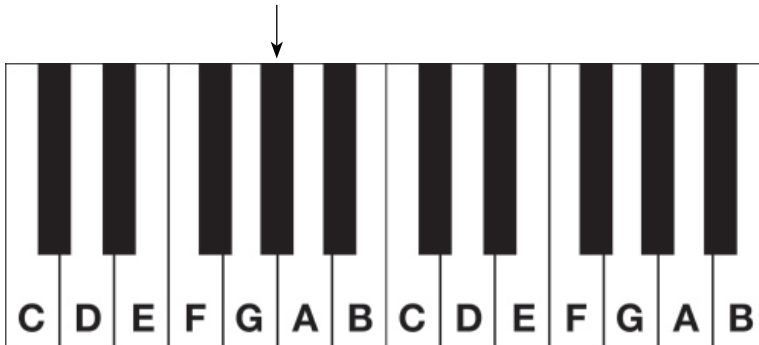
Manje, ake sibheke olunye uhlobo lo mbuzo.

Bhala inothi ELIPHEZULU kunenothi elinikeziwe.
Sebenzisa ubungako benothi obufanayo nobenothi elinikeziwe.



Isitebhu sokuqala: thola inothi elinikeziwe. Kulokhu, wu-G[#].

Isitebhu sesibili: thola inothi kuqwebhezinkinobho lwephiyano noma esithombeni soqwebhezinkinobho zephiyano.



Isitebhu sesithathu: umbuzo udinga umsindolibanga OPHEZULU, ngakho-ke, bala UYE PHEZULU izitebhu ezimbili kusuka ku-G[#]. Uzothola inothi u-A[#] noma inothimpawumbili lawo u-B^b. Kulesi sibonelo, ungasebenzisa noma yinothi njengempendulo (njengoba wenzile esibonelweni esingenhla)? **CHA, NGEKE!** Uma usebenza ngemsindolibanga, kufanele usebenzise igama lohlamvu ngokushesha emuva (noma ngaphambili) kwenothi elinikeziwe. Kulesi sibonelo, inothi elinikeziwe wu-G[#]. Igama lohlamvu olulandelayo emuva kokunyuka kuka-G, wu-A. Ngakho-ke, impendulo okuyiyo ngu-A[#].

Isitebhu sesine: umbuzo udinga ukuthi usebenzise ubungako benothi OBUFANAYO nenothi elinikeziwe (inothi elizigqimbili), ngakho-ke, yenza isiqiniseko sokuthi ubhala iphimbo okuyilo KANYE nesikhathi elisithathayo.



Ake sizame ukusebenzisa isu elifanayo endleleni ephambanayo nale enye.

Bhala inothi umsindolibanga OPHANSI kunenothi elinikeziwe.
Sebenzisa ubungako benothi obufanayo nenothi elinikeziwe.



Isitebhu sokuqala nesesibili: zizofana ncamashi nokungenhla.

Isitebhu sesithathu: umbuzo udinga **umsindolibanga** OPHANSI, ngakho-ke bala WEHLE izitebhu ezimbili kusuka ku-G#. Uzothola inothi u-F# noma inothimpawumbili elifanana no-G^b. **Khumbula ukusebenzisa umthetho wemsindolibanga esifunde ngayo ngenhla.** Igama lohlamvu ngaphambi nje kuka- G uma wehla ngu-F. Ngakho-ke, impendulo okuyiyo ngu-F#.

Isitebhu sesine: sifana nokungenhla.



Iphuzu elibalulekile okufanele ulikhumbule wukuthi kwizigamumsindolibanga ungasebenzisa amanothimpawumbili afana nazo, kodwa kumsindolibanga, ungasebenzisa igama lohlamvu olulandelayo kuphela kulayini.

Usufundile manje ngezinye zezinto ezibalulekile ngokubhalwa kwephimbo. Kodwa-ke, njengoba sesivele sibonile, isikhathi esithathwa yiphimbo kanye nephimbo kubhalwa kanyekanye ohlelweni lohlaka lobhalomculo, lokhu okusho ukuthi-ke igama lenothi kanye nobude balo konke lokhu kufakwa ophawini olulodwa. Nayi imithetho ebalulekile uma kubhalwa isikhathi esithathwa yiphimbo kanye nephimbo ndawonye.

Izindlela zesiqu senothi

Uma inothi lingenhla kwalayini ophakathi nendawo wohlaka lobhalomculo,
isiqu kufanele sibheke phansi.
Uma inothi lingezansi kwalayini ophakathi nendawo wohlaka lobhalomculo,
isiqu kufanele sibheke phezulu.
Uma inothi liphakathi nendawo kwalayini wohlaka lobhalomculo, isiqu
singabheka phezulu NOMA phansi.



Ukuhlanganisa amaqoqo ezingxenywe zenothi elisigqisinye

Usufundile ukuthi amaqoqo ezingxenywe zenothi elisigqisinye
angahlanganiswa ndawonye,
kuye ngokuthi-ke idingani inkombasigqi.

Usufundile futhi ukuthi iziqu zamanothi ezingenhla kwalayini ophakathi
nendawo kufanele zibheke phansi,
nokuthi futhi iziqu zamanothi angezansi kwalayini ophakathi nendawo
kufanele zibheke phezulu.

Kwenzekani uma iqoqo lengxenywe yenothi elisigqisinye okufanele
lihlnganiswe ndawonye linamanothi aphantsi nangenhla kwalayini?
Iziqu zingabheka ngaphi?



Isisombululo . . .

Thola inothi eliqhele kunawo wonke kulayini ophakathi nendawo.
Indlela isiqu salelo nothi esibheke kuyo sikhomba indlela yawo wonke
amanothi azohlanganiswa ndawonye kulelo qoqo.

Esibonelweni esingenhla:
Inothi eliqhele kunawo wonke kulayini ophakathi nendawo wu-G kulayini
ophansi kunabo bonke.
Isiqu salo kufanele sibheke phezulu.
Ngakho-ke, lonke iqoqo lamanothi kufanele lihlnganiswe nemisila eya
phezulu.

Isingeniso Esiyisisekelo Emkhakheni Womculo

Imsindolibanga nezigamumsindolibanga kubizwa NGEZIKHAWUMSINDO ngoba zimele **ibanga** phakathi kwamanothi. Singabala ibanga phakathi kwamanothi lawo angaphezulu komsindolibanga noma kwesigamumsindolibanga.

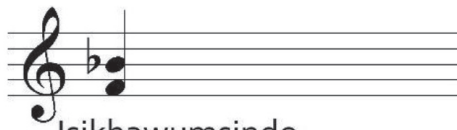
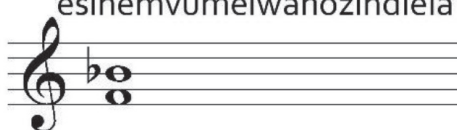
Zimbili izinhlobo zezikhawumsindo:

Isikhawumsindo **esinemvumelwanozindlela** – lesi senzeka uma amanothi amabili edlalwa ngesikhathi esisodwa.

Isikhawumsindo **esinemvunge** – lesi senzeka uma inothi elilodwa lilandela elinye, okusho ukuthi kulolu hlobo lwesikhawumsindo amanothi awadlalwa ngesikhathi esisodwa.

OKUBALULEKILE: uma inothi libhalwe ngaphezulu ngqo noma ngaphansi kwelinye, lokho kuchaza ukuthi kufanele amanothi uwadlale ndawonye.

Nazi ezinye zezibonelo zezikhawumsindo ezinemvumelwanozindlela nezinemvunge:

	
Isikhawumsindo esinemvunge	Isikhawumsindo esinemvumelwanozindlela
	

Izikhawumsindo zinamagama amabili (nokuyinto ecishe ifane negama nesibongo kumuntu); lokhu kusiza ekutheni zibonakale kahle. Isibonelo, Isikhawumsindo kulesi sithombe esingenhla yi- *PERFECT 4th* (ephelele 4th). Inombolo isitshela ukuthi kukhona ibanga legama elinezinhlamvu ezine kusuka enothini lokuqala kuya kwelesibili. Ngokujwayelekile, inombolo ibizwa ngokuthi WUSAYIZI wesikhawumsindo. Igama elithi 'perfect' likhombisa kucace bha ukuthi uhlobo luni luka-4th (kunezinhlobo ezintathu zika-4th: *operfect* (ophelele), *oncishisiwe* nokhulisiwe). Ngokujwayelekile, uhlobo lwesikhawumsindo lubizwa NGEKHWALITHI yalo.

Kulula ukuthola inombolo yasayizi wesikhawumsindo.

Bheka lesi sibonelo:



Isitebhu sokuqala: thola amanothi amabili. Kulokhu, inothi lokuqala u-C, kanti elesibili u-G.

Isitebhu sesibili: thola ukuthi yiliphi inothi ELIPHANSI KUNAWO WONKE. Qala enothini eliphansi kunawo wonke NGASO SONKE ISIKHATHI (kulokhu, u-C).

Isitebhu sesithathu: bala wenyuke ngamagama ezinhlamvu kusukela enothini eliphansi kanawo wonke uze ufike enothini eliphezulu kunawo wonke. Bala inothi eliphansi kanawo wonke njengo-1, isibonelo:

C D E F G
1 2 3 4 5

Ngakho-ke, lesi sibonelo u-5th.

Ake sibheke esinye isibonelo:



Isitebhu sokuqala: thola amanothi amabili: u-E no-B.

Isitebhu sesibili: thola inothi eliphansi kunawo wonke: u-B.

Isitebhu sesithathu: bala wenyuke ngamagama ezinhlamvu kusukela enothini eliphansi kunawo wonke uze ufike enothini eliphezulu kunawo wonke.

B C D E
1 2 3 4

Isikhawumsindo u-4th.

OKUBALULEKILE: kufanele UBALE usayizi wesikhawumsindo kusuka enothini laso eliphansi kunawo wonke.

Izikhawunothikugcina

Ngokomthetho, kunendlela emfushane yokubhala 'isikhawunothikugcina':

u-8^{ve}

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Ukuthola ikhwalithi lesikhawumsindo kunzima kakhulu.

Ake ubheke lezi zibonelo ezintathu ezilandelayo:



Uma sisebenzisa izitebhu esifunde ngazo ngenhla, lezi zibonelo zontathu zonke ziphenduka zibe ngama-4^{ths}. Nokho, kusobala ukuthi lezi zikhawumsindo AZIFANI ncamashi. Uma udlala la manothi ahamba ngamabili kuphiyano, uzozwa ukuthi inothi nenothi lizwakala ngendlela ehluke kakhulu kunelinye inothi. Yingakho izikhawumsindo zichazwa ngokusebenzisa USAYIZI NEKHWALITHI.

Ngaphambi kokuba sifunde ngendlela yokuthola ikhwalithi, kunezinto ezibalulekile okufanele uzazi. Ngokomthetho, o-4^{ths}, no-5^{ths} no-8^{ves} baqala BEPHELELE, kanti o-2^{nds}, no-3^{rds}, no-6^{ths} no-7^{ths} baqala BEBAKHULU. Isibonelo:



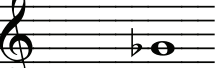
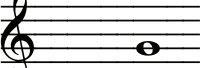
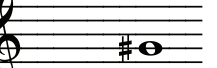
U-C – ku-G **ophelele** u5th.



U-C – ku-A **omkhulu** u6th.

Qaphela ukuthi uma isikhawumsindo sinikwa igama, IKHWALITHI iba NGAPHAMBI KUKASAYIZI, lokhu kwenzeka noma ngabe uqale ngokuthola usayizi.

Izikhawumsindo eziphelele nezinkulu zingenziwa zibe nkulu noma zibe ncane. Nali ithebula elikhombisa ukuthi amagama ezikhawumsindo eziphelele nezinkulu ashintsha kanjani uma ziba nkulu noma ziba ncane:

Isigamumsindo esincane		Isigamumsindo esikhulu		
Esincishisiwe	←	Esiphelele	→	Esikhulisiwe
				
Oncishisiwe u-5 th		Ophelele u-5 th		Okhulisiwe u-5 th

Imsindolibanga, izigamumsindolibanga nezikhawumsindo

Isigamumsindo esincane Isigamumsindo esincane Isigamumsindo esikhulu

Esincishisiwe ←	Esincane ←	Esikhulu →	Esikhulisiwe
Oncishisiwe u-6 th	Omncane u-6 th	Omkhulu u-6 th	Okhulisiwe u-6 th

Kule ngxenye yesifundo, izikhawumsindo ozozinikwa ukuba uzikhombe kuzoba ngezipehelele noma ezinkulu kuphela. Esifundweni esilandelayo, uzobe usufunda kabanzi ngokuthi usibona kanjani isikhawumsindo uma sikhulisiwe, sisincane noma sincishisiwe.

Ingxenye ebalulekile yalesi sahluko sesifundo wukuthi ufunda ukubona nokubhala izikhawumsindo KANYE nokwazi ukuthi zizwakala kanjani. Nali ithebula elinamagama ezingoma ezidumile eziqala ngezikhawumsindo ezithize:

Isikhawumsindo	Iculo
Omkhulu onyukayo u-2 nd	Thula Sizwe
Omkhulu owehlayo u-2 nd	Shosholoza
Omkhulu nyukayo u-3 rd	When the Saints Go Marching In
Owehlayo u-3 rd	Igqirha Lendlela
Ophelele onyukayo u-4 th	Mayenziwe
Ophelele owehlayo u-4 th	Thuma Mina <i>Noma</i> Nkosi Yam
Ophelele onyukayo u-5 th	Bawo Thixo Somandla
Ophelele owehlayo u-5 th	The Way You Look Tonight
Omkhulu onyukayo u-6 th	Siyahamba
Abakhulu o-7 th abavamisile neze ukusetshenziswa ezimvungeni emaculweni adumile, ngoba kunzima kakhulu ukubacula futhi bezwakala bebhimbabhibeka.	

7

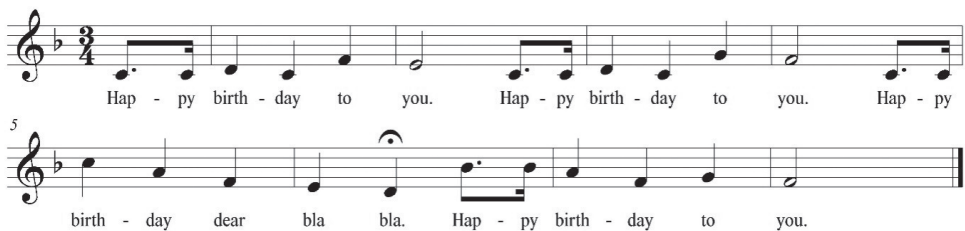
Imithetho yokuhlela iphimbo

Izikhawumanothi nokhiye

Usufundile manje ngokuyisisekelo sephimbo, njengohlaka lobhalomculo, izinkombanothi, amagama amanothi, umsindolibanga nezigamumsindolibanga kanye nezikhawumsindo eziyisisekelo. Manje-ke sesiqhubekela phambili, sibheka isahluko esibalulekile esimayelana nemithetho yokuhlela iphimbo. Akujwayelekile ukuthi ekuqoshweni komculo amanothi asetshenziswe noma yikanjani nje. Ngokujwayelekile, amanothi ahlelwa ngezindlela ezithize ukuze kube namanothi avelele kunamanye, noma lapho iqoqo lamanothi lisetshenzisiwe ukwenza imvunge kanye nemvumelwanozindlela ehambisana nalelo qoqo lamanothi.

Umsebenzi owenziwayo

Cula ishuni ethi, 'Happy Birthday to You', bese ngesikhathi ukuphiyano, thola wonke amanothi iculo eliwasebenzisayo.



Uma sibhala phansi elinye lamanothi asetshenzisiwe ngokuphindeka kuleli culo, nakhu esikutholayo:



Manje-ke, uma siwahlela ukuze amanothi aphakame ngokulandelana ngegama lohlamvu olulodwa ngesikhathi esisodwa, nakhu esikutholayo:

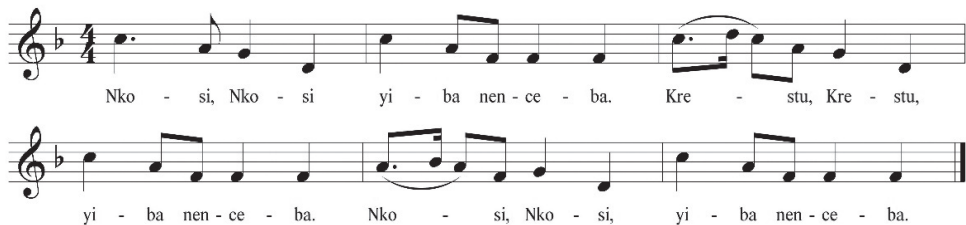


Lokhu kuhleleka kwamanothi ayisi-7 kubizwa ngesikhawumanothi. Manje ake ubale ukuthi inothi livela izikhathi ezingaki eculweni:

C = 9
D = 3
E = 2
F = 5
G = 2
A = 2
B^b = 2

Singabona ukuthi amanothi u-C no-F yiwona abaluleke kakhulu lapha. Anohlobo lwegravithi edonsela amanye amanothi kuwo. Okwamanje gcina lolu lwazi lwezikhawunothi emqondweni, ngoba luzobaluleka esifundweni esilandelayo.

Ake sibheke esinye isibonelo seculo lesiXhosa lesonto elisuselwe embhalweni emayelana neculo lesintu lomnsalo. Amagama alo asho ukuthi: Nkosi, Nkosi yiba nobubele. Krestu, Krestu yiba nobubele. Nkosi, Nkosi yiba nobubele.



Uma sibhala amanothi ngendlela ahleleke ngayo, njengoba senzile 'ku-Happy birthday', nakhu esikutholayo:



Uma-ke sesiwahlela ukuze amanothi ehlele ngezansi ngokulandelana ngegama lohlamvu olilodwa ngesikhathi esisodwa, nakhu esikutholayo (ngokusebenzisa u-D ophezulu, hhayi u-D ophansi):

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Lolu wuhlobo lwesikhawumanothi oluhlukile kulolu olungenhla. Lunamanothi ayisi-6 nje kuphela, kanti futhi lujwayelekile emculweni womdabu emaNgunini. Qaphela futhi ukuthi lo mculo uvamise ukuqala emanothini aphezulu kuya kwaphansi, kanti 'uHappy Birthday' yena ukhuphukela phezulu kancane bese ehlela phansi futhi. Umculo wasentshonalanga uvamise ukuqhakambisa izimvunge zona ezisondela maphezulu, zilokhu zikhuphukela ngaphezulu zibuye zehle futhi. Le ngxenye emaphezulu ivamise ukubizwa ngovuthondaba lwemvunge. Umculo womdabu uvamise ukusebenzisa izimvunge eziqala zibe phezulu bese kancane kancane zehlele phansi.

Ake manje-ke sibale ukuthi inothi livela izikhathi ezingaki:

$$U-D = 4$$

$$U-C = 6$$

$$U-B^b = 1$$

$$U-A = 7$$

$$U-G = 3$$

$$U-F = 10$$

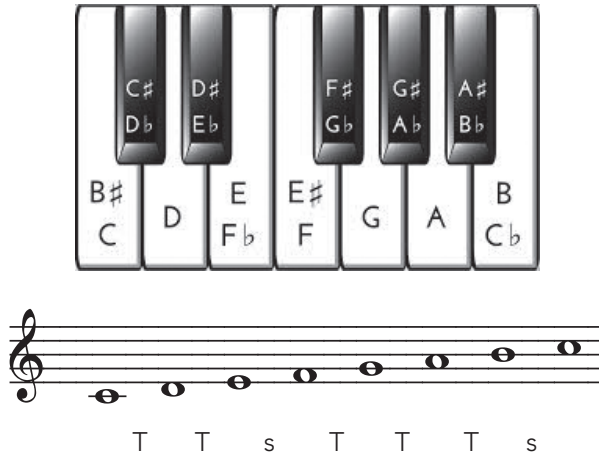
Mhlawumbe usuqaphelile ukuthi u-F A no-C yibona abavela kaningi kuno-G B^b no-D. Lokhu kwenziwa ukuthi uma leli culo lihambisana nomnsalo, amanothi u-F A no-C avumelana kahle nezintambo zomnsalo ovulekile, yingakho esetshenziswa kakhulu, kanti u-G B^b no-D bavumelana kahle nentambo emile, yingakho esetshenziswa ngaleso sikhathi nje.

Esikufundile kulezi zibonelo ezimbili wukuthi izikhawumanothi ngokwehlukana kwazo zisebenza ngezindlela ezahlukeneyo. Izikhawumanothi zasentshonalanga zinamanothi athize anegravithi; kanti izikhawumanothi zakuleli lakithi kwesinye isikhathi zidinga amanothi ahlanganisiwe wona avumelana kahle nenothi lomnsalo eliyinithimvana. Kukhona nezinye futhi izikhawumanothi zakhona la kwelakithi ezisebenza ngendlela ehlukile, njengezikhawumanothi zomnsalo wesiZulu ezazisetshenziswa nguMntwana uMagogo kwamanye amaculo akhe.

Ake sibuyele kwisikhawumanothi sasentshonalanga okuyiso esibe yisisekelo sika-'Happy Birthday to You'. Lokhu kuthiwa YISIKHAWUMANOTHI ESIKHULU. Sakheke kanjani isikhawumanothi esikhulu?

Thatha isikhawumanothi u-C njengesibonelo. Isikhawumanothi u-C sisebenzisa amanothi amhlophe kuphela kuphiyano, ngamanye amazwi amanyusanothi namahlisanothi awekho. Lo mdwebo ongezansi usebenzisa umthetho wokubhalwa

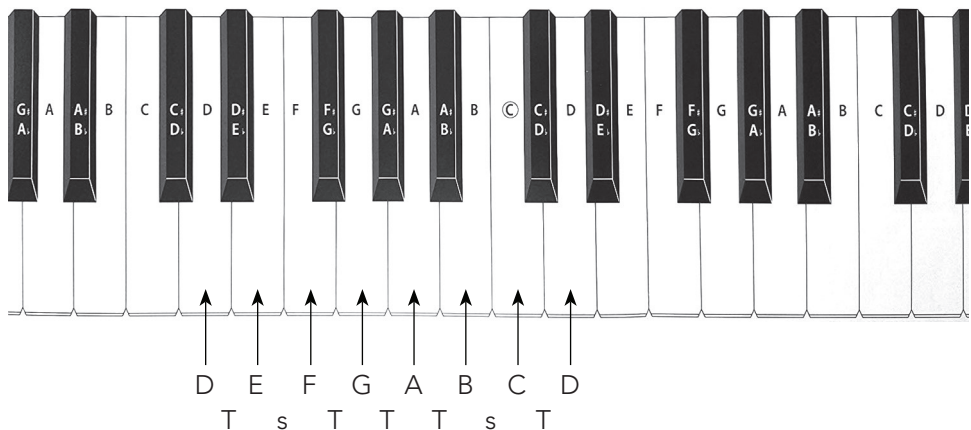
phansi kwesikhawumanothi sasentshonalanga nenothi laso lokuqala (u-C) eliphindeke ekugcineni, okwenza amanothi ayisi-8 esewonke kunayisi-7. Kulo mdwebo, qaphela ukuthi imsingolibanga nezigamumsingolibanga phakathi kwamanothi alandelayo ibizwe ngamagama.



Esingisini, u-T umele igama *itone*, u-s umele igama *isemitone*. EsiZulwini u-M umele umsingolibanga, u-S umele isigamumsingolibanga

Ukulandelana kwemisingolibanga nezigamumsingolibanga kwisikhawumanothi esikhulu u-: T T s T T TT s.

Ake sithole ukulandelana kwemisingolibanga nezigamumsingolibanga kwisikhawumanothi siqale ngenothi u-D bese siyabona uma lifana.



Manje usungabona ukuthi ukulandelana kwemisingolibanga nezigamumsingolibanga phakathi kwamanothi akufani no-C omkhulu: T s T TT s T.

Ngakho-ke, AKUSONA isikhawumanothi esikhulu lesi, ngoba asihambisani nomthetho wokulandelana kuka-T T s T T T s.

KODWA, singakwenza lokhu kulandelana kwamanothi kuhambisane nomthetho wokulandelana kwesikhawumanothi esikhulu ngendlela yakhona. Bheka isigamumsindolibanga phakathi kuka-E no-F. Kwisikhawumanothi esikhulu, isikhawumsindo sesibili wumsindolibanga. Usenza kanjani isigamumsindolibanga emsindwenilibanga? USIKHUPHULA NGESIGAMUMSINDOLIBANGA. Ngakho-ke, uma senza u-F abe ngu- F[#], akulona lodwa ibanga eliphakathi kuka-E no-F[#] eliba wumsindolibanga, kodwa nebanga eiphakathi kuka-F[#] no-G lizoba yisigamumsindolibanga (njengoba lokho kuwumthetho wokulandelana kwesikhawumanothi esikhulu)!

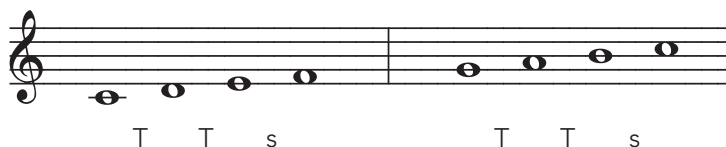
Okwamanje ukulandelana kuka-D (ono-F[#]) kubukeka kanje: T T s T T s T. Akukakalungi kahle hle okwamanje. Bheka isigamumsindolibanga phakathi kuka-B no-C. Uma senza leyo nto efana nale esiyenze emanothini u-E no-F, okwenze u-C a C[#], sithola umphumela ofanayo: umsindolibanga phakathi kuka-B no-C[#] nesigamumsindolibanga phakathi kuka-C[#] no-D (njengoba lokho kuwumthetho wokulandelana kwesikhawumanothi esikhulu)!

Manje-ke, lo mthetho wokulandelana usufana nesikhawumanothi esikhulu: T T s T TT s.

Lokhu kusitshela ukuthi uma ufuna isikhawunothi samanothi ayisi-8 esiqala ku-D sibe yisikhawumanothi esikhulu, kufanele unyuse u-F no-C. Ngamanye amazwi, isikhawumanothi esikhulu u-D sihlezi sinamanyusanothi amabili.

Isikhawumanothi singahlukaniswa ohhafu ababili bamanothi amane, okuthiwa IZIXHAMANOTHIMANE (igama elithi *tetra* = lisho okune). Isixhamanothi ngasinye sinemsindolibanga nezigamumsindolibanga ezakheke ngokufana.

Nangu u-C wesikhawumanothi esikhulu ehlukaniseke NGEZIXHAMANOTHIMANE ezimbili:



Uma sithatha isixhamanothimane sika-C wesikhawumanothi esikhulu bese sinezezela ngesinye isixhamanothimane ngenhla kwaso, sithola lokhu:



Uma ubuka ibanga phakathi kuka-C no-D, wumsindolibanga: TTsTTTs!
Lokhu yisikhawumanothi esikhulu ku-G esinenyusanothi elilodwa!

Uma sithatha isixhamanothimane sesibili sika-G wesikhawumanothi esikhulu (siqale ngo-8ve ophansi) bese sinezezela ngesixhamanothimane ngenhla, sithola lokhu:



Uma ubuka ibanga phakathi kuka-G no-A, wumsindolibanga: TTsTTTs!
Lokhu yisikhawumanothi esikhulu ku-D namanyusanothi amabili!

U-C wesikhawumanothi esikhulu akanawo amanyusanothi noma amahlisanothi.

U-G wesikhawumanothi esikhulu unenyusanothi elilodwa (u-F#).

U-D wesikhawumanothi esikhulu unamanyusanothi amabili (u-F# no-C#).

Yisiphi isikhawumanothi esizoba namanyusanothi amathathu?

Umkhondo: bala amagama ezinhlamvu kusuka ku-C kuya ku-G, bese wenza okufanayo kusuka ku-G kuya ku-D. Ngabe inombolo iyafana?

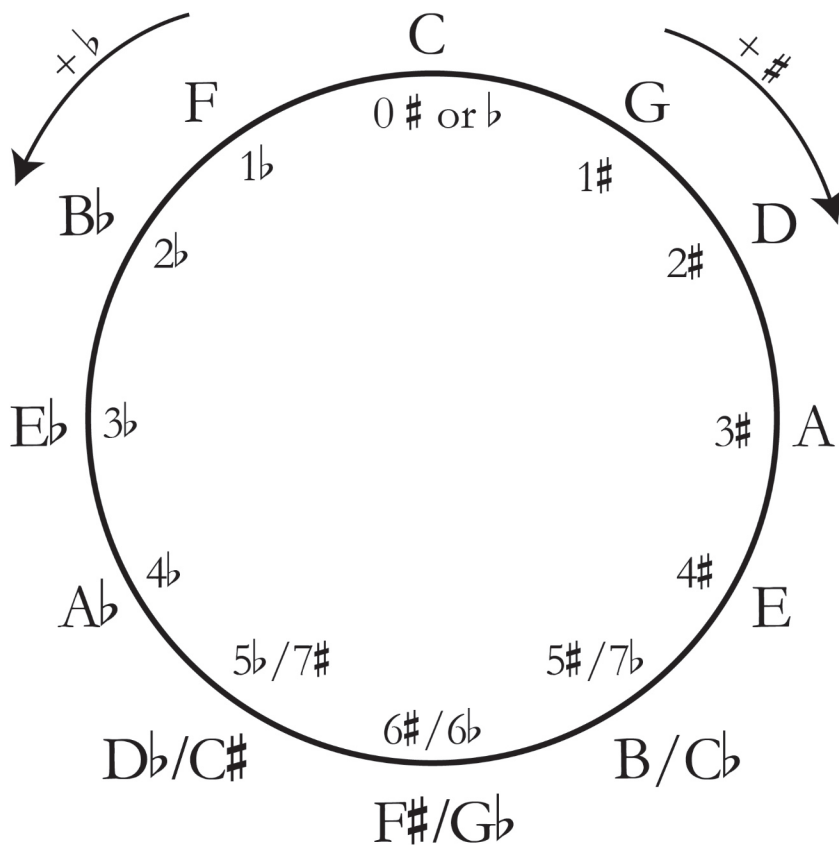
Iyini iphethini?

Yiliphi inyusanothi okuzoba yinyusanothi lesithathu?

Umkhondo: bala amagama ezinhlamvu kusuka ku-F# kuya ku-C#, bese wenza okufanayo kusuka ku-C#.

Sithemba ubonile ukuthi lokho kulandelana kususelwa kwisikhawumsindo sika- 5th ophелеle. Uma ubala amagama ezinhlamvu kusuka ku-C kuya ku-G (u-C u-D u-E u-F u-G), uthola u-5. Kuba yinto efanayo futhi kusuka ku-G kuya ku-D. Uma ubala unyuka amagama ezinhlamvu amahlanu kusukaku-D uzothola u-A. Ngakho-ke, isikhawumanothi esikhulu u-A sinamanyusanothi amathathu, kanti inyusanothi elinezezeliwe lizoba ngu-G# (u-C# D E F G#).

Uma siqhubeka nale phethini, sizozithola zonke izikhawumanothi ezinamanyusanothi (ziyisi-7 sezizonke). Yinto efanayo nakokhiye bamahlisanothi. Singakukhombisa lolu hlobo lwekhethelo lwezikhawumanothi endilingeni ebizwa ngokuthi YINDINGILIZI yama-5th.



lcashunwe: <https://stackoverflow.com/questions/51112227/how-to-create-text-around-a-circle-circle-of-fifths>.

Le ndilinga ingabukeka inemicikilisho emningi, kodwa iyithuluzi eliwusizo kakhulu. Siyazi ukuthi u-C wesikhawumanothi esikhulu akanawo amanyusanothi noma amahlisanothi; U-G wesikhawumanothi esikhulu unenyusanothi elilodwa; u-D wesikhawumanothi esikhulu unamanyusanothi amabili; bese kuthi u-A wesikhawumanothi esikhulu abe namanyusanothi amathathu. Izikhawumanothi ezinamanyusanothi atholakala ngasesandleni sokudla sendilinga, ahamba ngendlela yothi lwewashi ngo-5ths kusuka ku-C. Isikhawumanothi ngasinye ngokulandelana kwazo SINEZEZELA inyusanothi elilodwa. Ohlangothini olungasesandleni sobunxele bendlilinga kutholakala izikhawumanothi ezinamahlisanothi. Lolu hlangothi-ke lona luhamba ngendlela ephikisana nothi lwewashi ngo-5ths kusuka ku-C. Uzoqaphela ukuthi kokhiye abathathu abangaphansi kwendilinga bangamanothi angamanothimpawumbili. U-B F# no- C# abakhiye bamanyusanothi; kanti u-DbGb no- Cb bona abamahlisanothi.

Kubizwa NGOKHIYE ukulandelana okuhlukile kwamanyusanothi noma kwamahlisanothi okwenza isikhawumanothi esikhulu. Isibonelo, singakhuluma

ngokhiye womucu womculo owu-C wesikhawumanothi esikhulu. Ukhiye nokhiye UNENKOMBAKHIYE yawo okuyiyo ekutshela ukuthi yimuphi ukhiye osetshenziswayo; nokuba yinto ethi mayifane n*enane badge*. Indingilizi ka-5th ikutshela ukuthi mangaki amanyusanothi ukhiye nokhiye onawo, kodwa ayikutsheli ngokulandelana kwamanyusanothi.

Amanyusanothi kwinkombakhiye alandelana ngale ndlela ngaso sonke isikhathi:

F C G D A E B

Okubukeka kanje:



OKUBALULEKILE: ukulandelana kufanele kube njengale phethini engenhla. Ngamanye amazwi, sebenzisa u-F ophezulu wohlaka lobhalomculo, hhayi u-F ophansi ukukhombisa u- F[#].

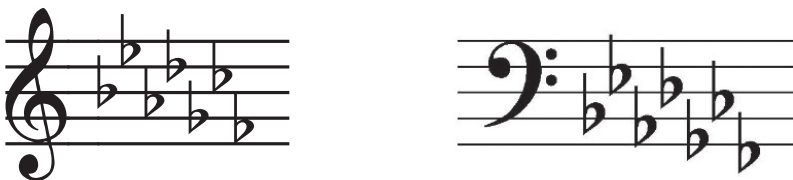
Nakhu ukulandelana okungatheni kwezinhlamvu emagameni ukuze ukhumbule ukulandelana kwamanyusanothi:

Father **C**harles **G**oes **D**own **A**nd **E**nds **B**attle

Amahlisanothi kwizinkombakhiye ahlezi elandelana ngale ndlela:

B E A D G C F

okubukeka kanje:



Isingeniso Esiyisisekelo Emkhakheni Womculo

Kukhona enye futhi indlela yokulandelana okungatheni kwezinhlamvu emagameni ekukhumbuza ukulandelana kwamahlisanothi:

Battle Ends and Down Goes Charles' Father

Empeleni nje udinga ukufunda ukulandelana kwezinhlamvu ezithize zamanyusanothi, bese uvele ubuyela emuva kumahlisanothi:



Ngokusebenzisa indingilizi yofifths ukubhala phansi izikhawumanothi ngendlela eyiyo.

Izikhawumanothi zingabhalwa ngezindlela eziningi.

Nasi isikhawumanothi esikhulu u-D:

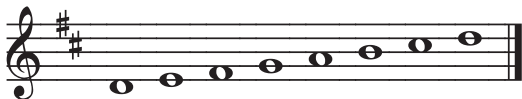
- esingenayo inkombakhiye:



- esinenkombakhiye:



- esikhuphukela maphezulu:



- esehlela maphansi:



- esikhuphukela maphezulu nesehlela maphansi (qaphela ukuthi inothi eliphezulu aliphindwa):



Khumbula

Inkombakhiye ifana ne**NAME TAG**.

Ikutshela ukuthi yimaphi amanothi adinga ukukhushulwa noma ukwehliswa.
Ukugcina lokhu kulandelana kusesimweni sayo **TTsTTTs**.

Okubalulekile ngezinkombakhiye

Amanothi phutha enkombakhiye anomthelela kuwo **wonke** amagama ezinhlamvu ezifanayo. Isibonelo:



Lokhu kusho ukuthi **BONKE** o-F kanye nabo **BONKE** o-C kufanele banyuswe, Hhayi nje kuphela u-F ophezulu no-C ophezulu kohlaka lobhalomculo.

Ezinye zezibonelo ngokusebenzisa indingilizi yo**fifths**:

Bhala isikhawumanothi esikhulu esikhuphukayo u-**A** esingenayo inkombakhiye.

Isitebhu sokuqala:

Thola u-A endingilizeni yo**fifths**.

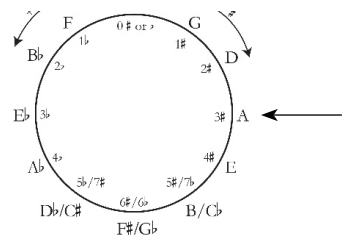
Ngabe inamanyusanothi noma amahlisanothi?

Impendulo: amanyusanothi amathathu.

Isitebhu sesibili:

Yimaphi amanyusanothi esiwadingayo?

Awokuqala amathathu: o-**FCG**DAEB (ngale ndlela yokulandelana).



Isitebhu sesithathu:

Manje, ake ubhale amanothi ayisishiyagalombili akhuphukayo esikhawumanothi.



1 2 3 4 5 6 7 8

Isitebhu sesine:

Faka amanyusanothi okuyiwo ngokuhlukana.



Esinye isibonelo:

Bhala **isikhawumanothi esikhulu esiyihlisanothi elehlayo u-E** esinenkombakhiye.

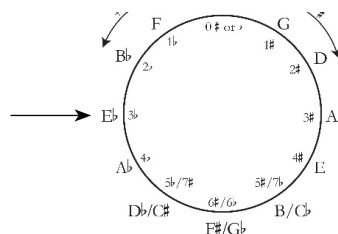
Isitebhu sokuqala:

Thola u-E oyihlisanothi endingilizini kufifths.
Ngabe unamanyusanothi noma amahlisanothi?

Impendulo: amahlisanothi amathathu.

Isitebhu sesibili:

Yimaphi amahlisanothi esiwadingayo?
O-BEADGCF (ngale ndlela yokulandelana)



Isitebhu sesithathu:

Manje, ake ubhale amanothi ayisishiyagalombili ashona phansi esikhawumanothi.



1 2 3 4 5 6 7 8

Isitebhu sesine:

Faka inkombakhiye okuyiyo ekuqaleni.



8

Eminye imithetho yokubhalwa komculo

Izindlela zokuculwa komculo

Eminyakeni, abaqambi bomculo baqhamuke nezimpawu ezicacisa kahle ukuthi bafuna abaculi bawucule kanjani umculo wabo. Ngakho-ke, ukwenza isibonelo, baqhamuka nezindlela ezilandelwayo ezikhombisa ukuthi umculo kufanele ube phezulu noma ube phansi kangakani uma uculwa. Baphinda futhi baqhamuka namatemu okuyiwo asetshenziswayo ukukhombisa ukuthi umculo kufanele uculwe ngokushesha noma ngokunwabuzela okungakanani, ngamanye amazwi, isivinini okuculwa ngaso. Iningi lezindlela zokucula zilandela indlela yase-Italy. Lesi sahluko simayelana nezindlela zokucula eziywayelekile ze *volume*, zesivinini sokuhlaselwa kwenothi.

Volume

Uphawu	Itemu	Incazelo
<i>pp</i>	Umyalelo wokuculela phansi kakhulu	Uphansi kakhulu
<i>p</i>	Umyalelo wokuculela phansi	Uphansi
<i>mp</i>	Umyalelo wokuculela phansi okumaphakathi	Uphansi ngokumaphakathi
<i>mf</i>	Umyalelomfutho omaphakathi	Uphezulu ngokumaphakathi
<i>f</i>	Umyalelomfutho	Uphezulu
<i>ff</i>	Umyalelokucula ngomfutho	Uphezulu kakhulu
<	Ukukhuphuka komsindo	Uyakhuphuka kancane kancane
>	Ukwehla komsindo	Uyehla kancane kancane

OKUBALULEKILE:

1. Izindlela zokucula ze*volume* ezisuke zihlosiwe zitholakala maphansana kohlaka lobhalomculo kanye nasenothini lokuqala okuyilo okuhloswe ukuthi uphawu lube nomthela kulo.
2. Uphawu lwe*volume* luba khona kuze kube yisikhathi lapho olunye uphawu lukhombisa izinguqukwana, ngamanye amazwi asikho isidingo sokuthi ubeke uphawu lwe*volume* ngaphansi kwenothi ngalinye, ngaphandle-ke uma ufuna inothi ngalinye libe ne*volume* ehlukile kuneyamanye amanothi. Isibonelo:



Kulesi sibonelo, u-C, u-D, u-E no-F kufanele badlalelwe phezulu bese kuthi u-G adlalelwe phansi. Qaphela ukuthi uphawu lomyalelomfutho lunomthelela ku-C, D, E no- F, yize noma libekwe kuphela ngaphansi kuka-C.

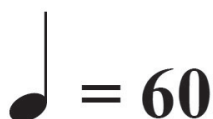
Uma usebenzisa izimpawu zokukhuphuka komsindo noma zokwehla komsindo, qinisekisa ukuthi ubeka isiqalo sophawu kanye nesiphetho salo ngaphansi kwalawo manothi ofuna umthelela lowo uqale khona futhi ugcine khona.

Isivinini

Umucu ngomucu womculo udlawa **ngesivinini** esithize. Isivinini leso singakhonjiswa ngokusebenzisa **uphawu lwenkombasivinini**.

Iyini inkombasivinini?

Kungaba yinto (njengomshini kagesi, *edigital* noma eyi- app) yokusetha isivinini esidingekayo. Izinkombasivinini zisitshela isivinini sesibalo esithize semgqigqo ngomzuzu. Isibonelo, inothi elisigqisinye elilodwa = 60 ukhombisa ukuthi inothi elisigqisinye elilodwa kufanele lidlalwe umzuzwana. Uphawu lwenkombasivinini luvamise ukubukeka kanje:



Izinkombasivinini zakudala zazibukeka kanje:



Isivinini singaphinde futhi sikhonjiswe ngegama elingachazisi kahle hle. Amagama esiNtaliyane yiwona avamise ukusetshenziswa uma kukhulunywa ngezimpawu zesivinini.

Uphawu lwesivinini	Incazelo
Umyalelosizotha	Luphansi futhi lunesizotha (20–40 bpm)
Umyalelokunensa	Luphansi (40–60 bpm)
Umyalelokunensa	Luvulelekile (40–60 bpm)
Inkombakunensa	Luphansi futhi lunesithunzi (66–76 bpm)
Umnenso	Lusejubaneni lokuhamba (76–108 bpm)
Umyalelosigqimaphakathi	Lumaphakathi nendawo (108–120 bpm)
Umdlandla	Luyashesha futhi lunentokozo (120–168 bpm)
Umyalelomfuthokushesha	Lunentokozo futhi luyashesha (ngaphezu kuka-140 bpm)
Umyalelokushesha	Lushesha kakhulu (168–200 bpm)
Ukwehlisasigubhukane	Luyehla kancane kancane
Uphawunyusakushesha	Luyakhuphuka kancane kancane

Isingeniso Esiyisisekelo Emkhakheni Womculo

Isivini singakhonjiswa ngegama KANYE nophawu lwenkombasivini, isibonelo:



Izimpawu eziphindayo

Izimpawu eziphindayo zisingatha lezo zahluko zomculo okufanele ziphindwe wumculi. Le midwebo engezansi ikhombisa ukuthi zisebenza kanjani izimpawu eziphindayo.



1. Hamba uye uphawu

2. Buyela uphawu lokuqala

3. Qhubeka ngaphandle kokuphazamiseka



1. Hamba uye uphawu

2. Buyela ekuqaleni

3. Ghubekani ngokwesibili

Ukuhlasela inothi:

Kwesinye isikhathi, abaqambi bomculo kuyenzeka bafune amanothi ukuthi aculwe 'sakuhlaselwa' noma aculwe ngendlela ethize. Kunezimpawu eziningi eziwusizo ezikhombisa ukuthi amanothi angaculwa kanjani.

Uphawu	Igama	Incazelo
.	Inothijuqu	Lukhombisa lapho amanothi ehlukana khona, ngendlela engafani neyomyalelosishelelisi. Kumyalelosishelelisi, amanothi alandelana ngokuxhumana ngaphandle kokunqamuka esikhaleni. Uma kusetshenziswe uphawu lwenothijuqu, ngokujwayelekile lokhu kuchaza ukuthi inothi kufanele lidlalwe cishe uhhafu wobude balo njengoba kade linjalo, ngamanye amazwi, kunezikhala phakathi kwamanothi.
–	Ithenutho	Inothi (noma isixhamanothi) elibanjelwa ukubaluleka kwalo lonke noma ngaphezudlwana kwalokho.
>	Olugcizelelayo	Lukhombisa ukugcizelela, ukuqina kwezwi, noma ukuhlasela okunamandla enothini elithize, esethini yamanothi noma yesixhamanothi.
Λ V	Olugcizelela kakhudlwana	Yingxenye yenothi eligcizelelayo kakhudlwana.
<i>sfz</i>	Umyalelokugcizelela	Lukhombisa ukugcizelela okungalindelekile noma okulindeleke kakhulu.
<i>ped.</i>	Iphedali	Lukhombisa lapho umshayiphiyano kufanele acindezele khona iphedali. Uphawu lwenkanyezi lusetshenziselwa ukukhombisa lapho umshayiphiyano kufanele adedele iphedali.
☺ ☹	Iphozi	Lukhombisa ukuthi inothi kufanele libanjwe isikhathi sobude obuthize, ngokujwayelekile kuye ngesinqumo esithathwa yilowo osuke ecula.

Isingeniso Esiyisisekelo Emkhakheni Womculo

Isimo

Kwesinye isikhathi, abaqambi bomculo basebenzisa amatemu esiNtaliyane ukukhombisa isimo somucu womculo, noma ukuthi kufanele sibe njani isimo esiqeshini esifushane somculo. Ziningi izimpawu ezijwayelekile ezisetshinziwayo ukukhomba isimo.

Itemu	Incazelo
<i>l-animato</i>	Luculwa ngomdlandla
<i>l-appassionato</i>	Luculwa ngomoya wogqozi
Inkombakucula	Ngendlela esamculo
Okumtoti	Luculwa ngendlela emtoti
Umyalelovezamizwa	Luculwa sakukhombisa imizwa
Igiocososo	Luculwa sakudlala
Umyalelozingakucokama	Ludlalwa ngenhlonipho
Umyalelokuzotha	Ludlalwa ngenhlonipho enkulu
Imesto	Ludlalwa ngomuzwa wosizi
Irisoluto	Lunamandla
Isemplice	Lulula
Itranquillo	Ludlalwa ngesizotha

OKUBALULEKILE OKOKUGCINA:

Le ncwadi yokufunda, yenzelwe ukusebenza malungana nokusuke kufundiswa bukhoma. Akukho okungathatha indawo yenzuzo yokubamba iqhaza ekufundiseni nasekufundeni bukhoma. Isibonelo, ngesikhathi kufundwa bukhoma uba nethuba lokufunda nakwabanye abafundi ofunda nabo njengoba bebuza imibuzo noma bezama ukwenza izibonelo, basuke becathuliswa umfundisi kulezi zikhathi. Okunye futhi okubalulekile wukuthi ukufunda la manothi ngaphandle kokwenza izibonelo ezihambisana nala manothi ngeke kukusize ekuhlolweni kwakho. Ukuze uyizwe kahle injulalwazi yomculo kanye nokulalela umculo uqobo, kufanele uzijwayeze ukufunda ngawo kanye nokuwulalela. Okokugcina, injulalwazi yomculo kanye nokulalela wona umculo uqobo kuba yinto enosizo uma wena usuqala ukuzenzela owakho umculo. Lo msebenzi wokubhala umculo oqale ukufunda ngawo ngosuku lwakho lokuqala kulesi sifundo somculo, kuwumsebenzi okuhloswe ngawo ukuthi usizakale ngokwenza into ebonakalayo ngosuke usukufundile. Uma uhudula izinyawo kulowo msebenzi, ngeke ukwazi ukuvuna ngokuphelele izithelo zokukwazi ukufunda nokubhala umculo. Ngikufisela impumelelo njengoba uqala lesi sifundo esimnandi.

Iworksheet yokuqala

Izinhloso:

1. Ukuzijwayeza ukudweba amanothi asigqisinye, amanothi azigqimbili, amanothi azigqimbili anamadothi, namanothi azigqizine kanye nokulingana kobungakosikhathi sokuthula sawo ngendlela eyiyo;
2. Ukuzijwayeza nezikhathi ezithathwa yilawa manothi;
3. Ukufunda amagama afanele ala manothi.

Ukudweba amakhanda amanothi kanye neziqu zamanothi

Uma uqaphelisisa ekubhalweni kohlaka lobhalomculo oluprintiwe, uzobona ukuthi amakhanda amanothi awayona indilinga ngqo, kodwa ayizindilingana saqanda (acishe amise okwebhola lombhoxo). Qaphela ukuthi amakhanda atshekele kancane ngaphezulu kusuka esandleni sokunxele kuya esandleni sokudla. Lokhu akwenzeki enothini elizigqizine okuyilona elingatsheki.

Uma udweba isiqu senothi:

Uma isiqu sibheke ngezansi, kufanele sibe ngasesandleni sobunxele sekhandla lenothi.

Uma isiqu sibheke phezulu, kufanele sibe ngasesandleni sokudla sekhandla lenothi.

Akufanele sitsheke isiqu kodwa kufanele sibheke phezulu noma phansi.

Isingeniso Esiyisisekelo Emkhakheni Womculo

Dweba izibonelo ezinhlanu zenothi ngalinye elingezansi. Qaphela ukuthi isiqu singakuphi.



Ngaphansi kwenothi ngalinye, bhala ukuthi lidinga ukubalwa kangaki.



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Bhala igama elamukelekile elisetshenziswa emkhakheni womculo eduze kwenothi ngalinye kulawa angezansi.



ubizwa nge _____



ubizwa nge _____



ubizwa nge _____



ubizwa nge _____

Dweba izibonelo ezinhlanu zobungakosikhathi sokuthula ngasinye.

z

z

z.

z

Ngaphansi kwenothi ngalinye kanye nobungakosikhathi sokuthula, bhala inani lezigqi elifanele.

z

z

z.

z

Uma inothi elisigqisinye lifanele ukubalwa kanye, bese kuthi inothi elizigqizine libalwe kane, mangaki amanothi asigqisinye ehlanganisiwe angakhipha inothi elizigqizine?

Uma inothi elizigqimbili lifanele ukubalwa kabili, bese kuthi inothi elizigqizine libalwe kane, mangaki amanothi azigqimbili ehlanganisiwe angakhipha inothi elizigqizine?

Mangaki amanothi asigqisinye ehlanganisiwe angakhipha inothi elizigqimbili?

Mangaki amanothi asigqisinye ehlanganisiwe angakhipha inothi elizigqimbili elinedothi?

Iworksheet yesibili

Izinhloso:

1. Ukuzijwayeza ukudweba izingxenyane zenothi elisigqisinye, izingxenyana zenothi elisigqisinye namanothi anamadothi kanye nokulingana bobungakosikhathi sokuthula kwawo ngendlela;
2. Ukuzijwayeza izikhathi ezithathwa yila manothi;
3. Ukufunda amagama amanothi asetshenziswayo emkhakheni womculo;
4. Ukuthola ukuthi kusho ukuthini ukuhlanganisa amadothi amabili eduze kwenothi.

Ukudweba izingxenyane zenothi elisigqisinye nezingxenyana zenothi elisigqisinye ngendlela efanele
Uma udweba ifulegi noma amafulegi engxenyane yenothi elisigqisinye noma engxenyana yenothi elisigqisinye:
Uma isiqu sibheke ngezansi, ifulegi kufanele libuyele ngaphakathi ngasekhanda lenothi.
Uma isiqu sibheke phezulu, kufanele ifulegi lithi ukuphumela ngaphandle kwekhanda lenothi.

Dweba izibonelo ezinhlanu zamanothi akhonjiswe ngezansi nobungakosikhathi sokuthula obukhonjiswe ngezansi:



Ngaphansi kwenothi ngalinye kwalandelayo, bhala inani lezigqi elifanelwe yinothi ngalinye.













Bhala igama elamukelekile elisetshenziswa emkhakheni womculo eduze kwenothi ngalinye.

 ubizwa nge _____

 ubizwa nge _____

 ubizwa nge _____

 ubizwa nge _____

Dweba izibonelo ezinhlanu zobungakosikhathi sokuthula ezingezansi.

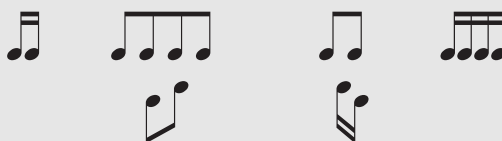






Izingxenywe zenothi elisigqisinye nezingxenyana zenothi elisigqisinye
'zingahlanganiswa' ndawonye.

Nokho ukuhlanganisa amanothi 'akuwenzi abe yinto eyodwa', kepha kwenza
kuba lula ukuwabona. Nazi ezinye izibonelo:



OKUBALULEKILE:

**Buka ukuthi kusebenza kanjani lapho okuhlanganiswe khona uma iziqu
zamanothi zibheke phansi.**

Zama ukuhlanganisa ndawonye la maqoqo amanothi:

Thola ukuthi kusho ukuthini uma inothi linamadothi amabili eduze kwalo, njengaleli:



Umkhondo: Uma uba nenkinga yokuthola ukuthi ngabe asho ukuthini
amadothi amabili eduze kwenothi,
buka le-video:
<https://www.youtube.com/watch?v=ckJK0HRCZpA>.

Afanelwe ukubalwa kangaki la manothi?

Iworksheet yesithathu

Izinhloso:

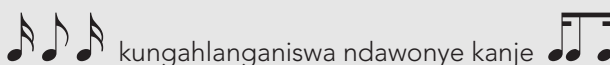
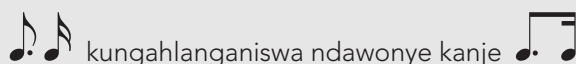
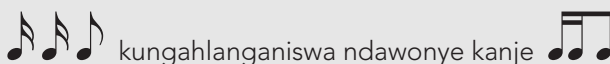
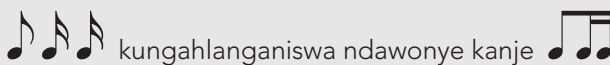
1. Ukuzijwayeza ukudweba amanothi omculo namaqoqo amanothi omculo;
2. Ukufunda ukuthi zihlanganiswa kanjani izingxenyane zenothi elisigqisinye nezingxenyana zenothi elisigqisinye;
3. Ukubala inani eliphelele lamaqoqo amanothi;
4. Ukubala inani eliphelele lamanothi ahlanganiswe ndawonye.

Kopisha la maqoqo amanothi alandelayo nobungakosikhathi sokuthula kule ndawo engezansi. Khumbula ukugcina iziqu zamanothi zigondile.



Izingxenye zenothi elisigqisinye nezingxenyana zenothi elisigqisinye
zingahlanganiswa ndawonye!

Nazi izibonelo ezikhombisa ukuthi kuyenzeka:



Isingeniso Esiyisisekelo Emkhakheni Womculo

Hlanganisa la maqoqo amanothi ndawonye.









Thola ukuthi lamaqoqo amanothi afanelwe yimigqigqo emingaki.

Isibonelo:



$$\text{Dotted quarter} = 1 \frac{1}{2}$$

$$\text{Eighth note} = \frac{1}{2}$$

$$\text{Beamed eighth and sixteenth notes} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$$

$$\text{Quarter note} = \frac{1}{2} + \frac{1}{2} = 1$$

Impendulo:

$$1 \frac{1}{2} + \frac{1}{2} + 1 + 1 = 4$$

$$\text{Quarter note} + \text{Beamed eighth and sixteenth notes} =$$

$$\text{Dotted half note} + \text{Eighth note} =$$

$$\text{Dotted quarter note} + \text{Beamed eighth and sixteenth notes} =$$

$$\text{Beamed eighth and sixteenth notes} + \text{Beamed eighth and sixteenth notes} + \text{Quarter note} =$$

Bala ubude bala manothi ahlanganisiwe.



Worksheet yesine

Izinhloso:

1. Ukuqala ngokusebenza ngenhlukanakabili yomgqigqo yezinkombasigqi;
2. Ukufaka izinhlukanisamgamu ezikhaleni ezifanele ezibonelweni onikezwe zona;
3. Ukufaka ubungakosikhathi sokuthula ezikhaleni ezifanele ezibonelweni onikwezwe zona.

Faka amagama ashodayo kulokhu okungezansi (impendulo kufanele ibe phakathi kwalezi: 'kungaki' noma 'inhloboni').

Inombolo engaphezulu kwinkombasigqi isitshela _____
semigqigqo ekhona kwibha nebha.

Inombolo engaphansi kwinkombasigqi isitshela ukuthi _____
yenothi elimele umgqigqo.

Gcwalisa ibha eyodwa yenothi elisigqisinye yenkombasigqi ngayinye kulezi ezingezansi.

4
4

3
4

2
4

Faka izinhlukanisamgamu ezindaweni ezifanele kulezi zibonelo ezintathu ezingezansi.

4
4



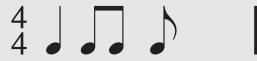
3
4



2
4

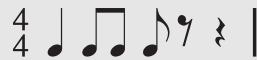


Ugcwaliswa kanjani umgamu onobungakosikhathi sokuthula?



$$\text{Quarter note} = 1 \quad \text{Two eighth notes} = 1 \left(\frac{1}{2} + \frac{1}{2} \right) \quad \text{Half note} = \frac{1}{2}$$

$$1 + 1 + \frac{1}{2} = 2 \frac{1}{2} \quad 4 - 2 \frac{1}{2} = \frac{1}{2} \text{ kanye no-1 (} \text{♩} + \text{♩} \text{)}$$



Gcwalisa la mabha alandelayo ngobungakosikhathi sokuthula obufanele ukuze ibha nebha igcwale. Ungabusebenzisi ubungakosikhathi sokuthula obunamadothi kulo msebenzi. Amanye amabha angadinga ukuthi kuhlenganiswe ubungakosikhathi sokuthula.



Iworksheet yesihlanu

Izinhloso:

1. Ukuqhubeka nokuzijwayeza inhlukanakabili yomgqigqo yenkombasigqi;
2. Ukuqala usebenze ngokuhamba kwezigqi okungxube;
3. Ukuzijwayeza ukubhala izigqintathu nezigqimbili kwezintathu;
4. Ukufaka izinhlukanisamgamu ezikhaleni ezifanele ezibonelweni onikezwe zona;
5. Ukufaka ubungakosikhathi sokuthula ezikhaleni ezifanele ezibonelweni onikwezwe zona.

Mangaki amanothi asigqisinye anamadothi (♩.)aku- $\frac{6}{8}$?

Mingaki imigqigqo ku- $\frac{6}{8}$?

Mangaki amanothi asigqisinye anamadothi (♩.)aku- $\frac{3}{8}$?

Mingaki imigqigqo ku- $\frac{3}{8}$?

Mangaki amanothi asigqisinye anamadothi (♩.)aku- $\frac{12}{8}$?

Mingaki imigqigqo ku- $\frac{12}{8}$?

Zingaki izingxenye zenothi elisigqisinye (♩) emanothini asigqisinye anamadothi (♩.)?

Amanothi azigqimbili anamadothi

Ku- $\frac{3}{4}$ enothini elizigqimbili (♩.) ufanelwe yimigqigqo emithathu, ngamanye amazwi, yilokhu. ♩ + ♩ + ♩

Ku- $\frac{6}{8}$ enothini elizigqimbili (♩.) ufanelwe yimigqigqo emibili, ngamanye amazwi, yilokhu ♩ + ♩.

Faka izinhlukanisamgamu ezikhaleni ezifanele kulezi zibonelo ezilandelayo:

3
4



6
8



2
4



9
8



Ngezansi, bhala kathathu izingqintathu, bese uphendula imibuzo ezolandela.





Ucabanga ukuthi asho ukuthini la maqoqo ezigqintathu?





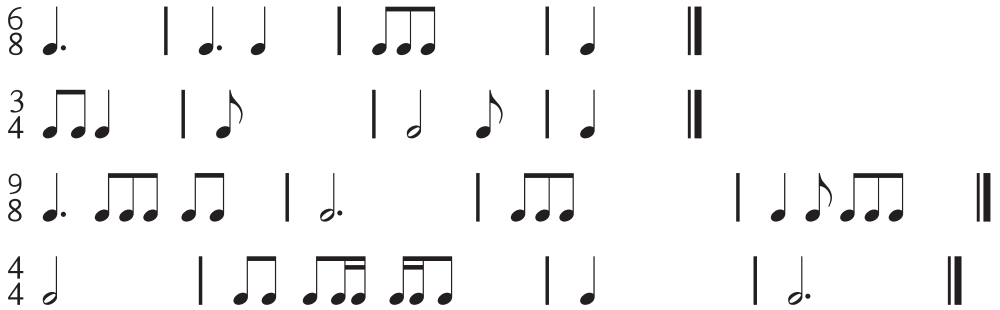




Isingeniso Esiyisisekelo Emkhakheni Womculo

Gcwalisa la mabha alandelayo ngobungakosikhathi sokuthula. Kwizinkombasigqi ezingxube, sebenzisa kuphela ubungakosikhathi sokuthula obunamadothi.

Gcwalisa la mabha alandelayo ngobungakosikhathi sokuthula. Khumbula ukwenza amaqoqo amathathu ezigqi kwizinkombasigqi ezingxube.



I*worksheet* yesithupha

Izinhloso:

Ukuzijwayeza ukwenza amaqoqo amanothi ngendlela efanele ngokwenkombasigqi.

Beka la manothi ngamaqoqo ngendlela efanele ngokwenkombasigqi:



Isingeniso Esiyisisekelo Emkhakheni Womculo

Beka ngamaqoqo la manothi nobungakosikhathi sokuthula ngendlela efanele ngokwenkombasigqi:



Amabha aphelele obungakosikhathi sokuthula

Uma kudingeka ubungakosikhathi sokuthula bebha yonkana kunoma iyiphi inkombasigqi.

Kufanele **ngaso sonke isikhathi** lokho ukukhombise ngobungakosikhathi sokuthula senothi elizigqizine.

Noma impela ngabe ibha incane kakhulu kubungakosikhathi sokuthula senothi elizigqizine, isibonelo:



Gcwalisa la mabha alandelayo ngobungakosikhathi sokuthula:

$\frac{3}{4}$						
$\frac{6}{8}$						
$\frac{2}{4}$						
$\frac{9}{8}$						

Iworksheet yesikhombisa

Izinhloso:

1. Ukuqhubeka nokuzijwayeza ukuhlanganisa amanothi ngamaqoqo ngendlela efanele ngokwenkombasigqi;
2. Ukuqhubeka nokuzijwayeza ukusebenzisa izinkombasigqi ezingxube;
3. Ukuqhubeka nokuzijwayeza ukufaka izinhlukanisamgamu.

Beka ngamaqoqo la manothi nobungakosikhathi sokuthula ngendlela efanele ngokwezinkombasigqi zakhona.



Faka izinhlukanisamgamu kulezi zibonelo.

6
8



9
8



4
4



12
8



3
4

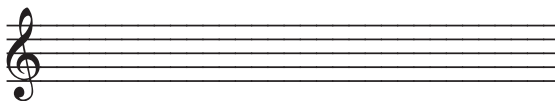
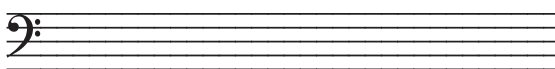


Iworksheet yesishiyagalombili

Izinhloso:

1. Ukuzijwayeza ukudweba amaphimbo aphezulu nezinkombanothi zebhesi;
2. Ukuzijwayeza ukubhala amanothi ngendlela ecacile kolayini nasezikheleni ohlakeni lobhalomculo;
3. Ukubhala amagama amanothi ngendlela okuyiyo oqwembenizinkinobho zephiyano;
4. Ukukwazi ukubona amanothi ohlakeni lobhalomculo.

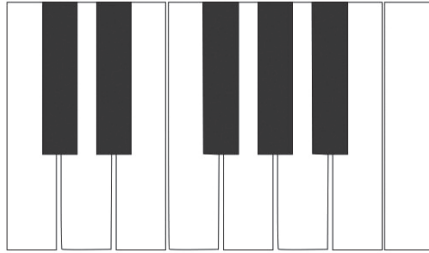
Dweba izibonelo ezinhlanu zamaphimbo aphezulu nezinkombanothi zebhesi kulezi zikhala ezinikeziwe ngezansi:

1	2	3	4	5
				
1	2	3	4	5
				

Yimuphi ulayini wohlaka lobhalomculo olungiswe yinkombanothi yamaphimbo aphezulu kanti futhi umele liphi inothi?

Yimuphi ulayini wohlaka lobhalomculo olungiswe yinkombanothi yebhesi kanti futhi umele liphi inothi?

Kulesi sithombe esingezansi soqwembезinkinobho lephiyano, bhala igama lenothi okuyilo likakhiye ngokhiye.



Bhala igama lenothi ngalinye kolayini abanikeziwe.



Indlela yesiqu senothi

Uma inothi lingaphezu kwalayini ophakathi nendawo wohlaka lobhalomculo, kufanele isiqu sibheke phansi.

Uma inothi lingaphansi kwalayini ophakathi nendawo wohlaka lobhalomculo, kufanele isiqu sibheke phezulu.

Uma inothi liphakathi nendawo kwalayini wohlaka lobhalomculo, isiqu singabheka phezulu NOMA phansi.

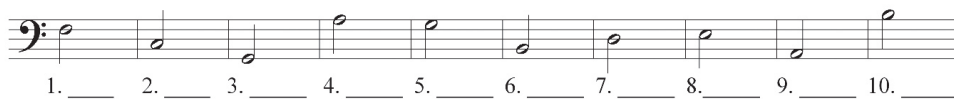


Bhala amanothi adingakalayo, uwenze **izingxenye zenothi elisigqisinye**. Uma kwenzeka izimpendulo ziba mbili, zibhale zombili. Khumbula ukuthi uma inothi lingaphezu kwalayini ophakathi nendawo, kufanele isiqu sibheke phansi, kanti uma inothi lingaphansi kwalayini ophakathi nendawo, kufanele libheke phezulu.



Isingeniso Esiyisisekelo Emkhakheni Womculo

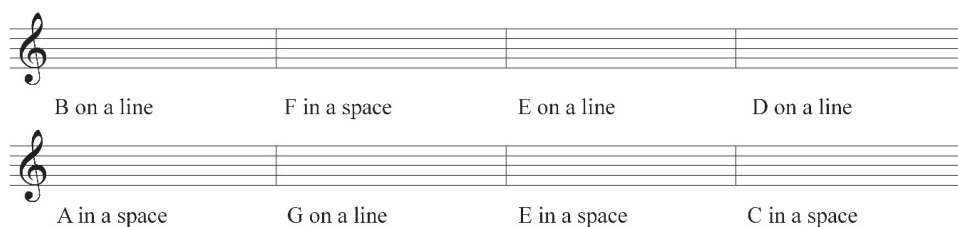
Bhala igama lenothi ngalinye kolayini abanikeziwe.



Bhala amanothi adingekayo, uwabhale uwenze **abe ngamanothi asigqisinye**. Uma kwenzeka izimpendulo ziba mbili, zibhale zombili. Khumbula ukuthi uma inothi lingaphezu kwalayini ophakathi nendawo, kufanele umsila ubheke phansi, kanti uma inothi lingaphansi kwalayini ophakathi nendawo, kufanele libheke phezulu.



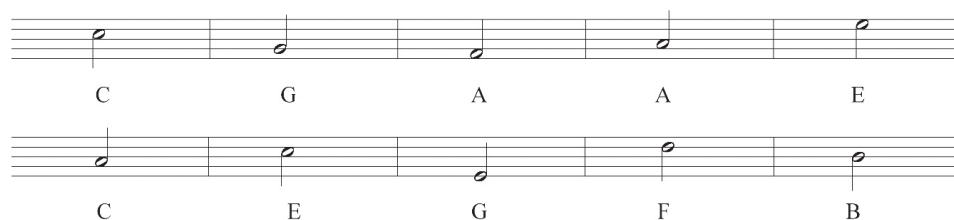
Bhala la manothi alandelayo abe ngamanothi azigqimbili:



Bhala la manothi alandelayo abe **yingxenyana yamanothi asigqisinye**:



Beka inkombanothi efanele phambi **kwenothi ngalinye** kulawa aladendelayo:

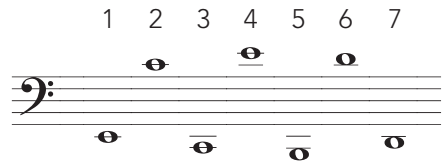
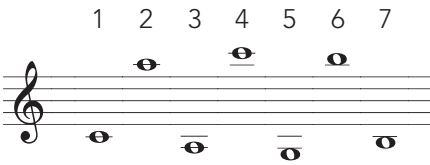


Iworksheet yesishiyagalolunye

Izinhloso:

1. Ukuqhubeka ubone amanothi abhalwe emigqenikuxhuma (olayini abathathu ngaphezu noma ngaphansi kohlaka lobhalomculo);
2. Ukuzijwayeza ukubhala amanothi emigqenikuxhuma;
3. Ukuzijwayeza ukubhala amanothi phutha;
4. Ukwazi ukubona amanothimpawumbili amanothi ahamba ngambili;
5. Ukwazi ukubona nokubhala imisindolibanga nezigamumsindolibanga.

Thola ukuthi ayini la manothi alandelayo:



Iziqu zemigqakuxhuma zamanothi

Uma inothi lisemgqenikuxhuma, kufanele isiqu salo sisabalale size sifike kulayini ophakathi nendawo wohlaka lobhalomculo.



Imigqakuxhuma nezikhala

Uma inothi lisesikhaleni somugqakuxhuma:

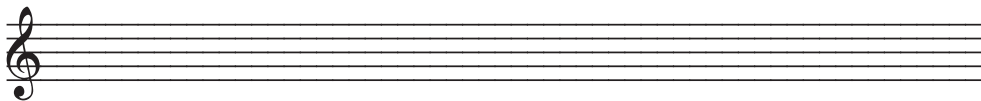
Uma lingaphezu kohlaka lobhalomculo, **ungawufaki** umugqakuxhuma ngaphezu kwalo.

Uma lingaphansi kohlaka lobhalomculo, **ungawufaki** umugqakuxhuma ngaphansi kwalo.



Bhala la manothi abe ngamanothi azigqimbili kwinkombanothi yamaphimbo aphezulu owanikeziwe:

- U-E ngaphezu kohlaka lobhalomculo.
- U-G ngaphansi kohlaka lobhalomculo.
- U-C phakathi nendawo.
- U-A ongaphezu kohlaka lobhalomculo.
- U-D ngaphezu kohlaka lobhalomculo.
- U-F ngaphansi kohlaka lobhalomculo.



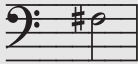
Bhala la manothi abe ngamanothi azigqizine enkombanothini yebhesi onikezwe yona ngezansi:

- U-G ngaphezu kohlaka lobhalomculo.
- U-C phakathi nendawo.
- U-C ngaphansi kohlaka lobhalomculo.
- U-A ngaphansi kohlaka lobhalomculo.
- U-E ngaphezu kohlaka lobhalomculo.
- U-E ngaphansi kohlaka lobhalomculo.

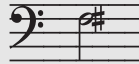


Libekwaphi inothiphutha?

Inothiphutha libekwa ngaphambili ngqo, HHAYI ngemuva kwenothi eliba nomthelela kulo.

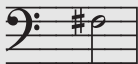


Kulungile lokhu!

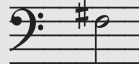


Akulungile lokhu!

Inothiphutha elimtholela kulayini noma isikhala kufanele libhalwe ngendlela yokuthi ulayini unqamula ngqo phakathi nendawo kwalo.



Kulungile lokhu!



Akulungile lokhu!

Lihlala isikhathi esingakanani inothiphutha?

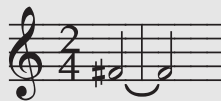
Inothiphutha (♯) lihlala kulayini owodwa noma esikheleni esisodwa kuze kube yisikhathi lapho olunye uphawu lulususa, noma kuba yisikhathi sebha.

Uma kwenzeka elinye inothi kuleyo bha efanayo, inothiphutha lizoba nomthelela kulelo nothi.



Kulesi sibonelo esingenhla, u-F wesibili unyusiwe.
Kodwa owesithathu **akanyusiwe** ngoba ukwibha entsha.

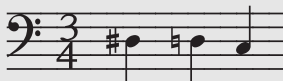
Uma amanothi amabili nangaphezulu ehlanganiswe ngethayi, inothiphutha elisenothisini lokuqala liba nomthelela kuwo wonke lawo manothi elihlanganiswe nawo, isibonelo:



U-F kwibha yesibili unyusiwe nawo futhi ngoba uhlangene nenyusanothi u-F kwibha engaphambi kwalo.

Uphawumvelo

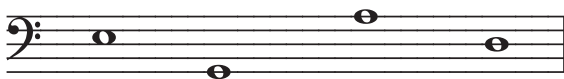
Uphawumvelo lususa inyusanothi noma ihlisanothi.



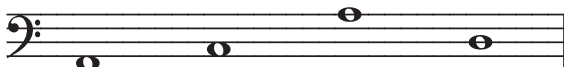
Zijwayeze ukubhala amanyusanothi ngaphambili kwala manothi.



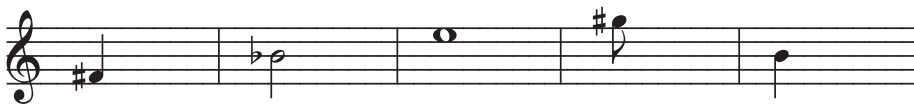
Zijwayeze ukubhala amahlisanothi ngaphambili kwala manothi.



Zijwayeze ukubhala izimpawumvelo ngaphambili kwala manothi.



Bhala amanothi ayisigamumsindolibanga aphezulu kunalawa onikezwe wona ngezansi. Sebenzisa ubungako bamanothi obufanayo.



Bhala amanothi ayisigamumsindolibanga aphansi kunalawa onikezwe wona ngezansi. Sebenzisa ubungako bamanothi obufanayo.



Bhala amanothi anomsindolibanga **ongaphezulu** kunalawa onikezwe wona ngezansi. Sebenzisa ubungako bamanothi obufanayo. Sebenzisa isithombe soqwembhezinkinobho sephiyano kusuka kwiworksheet yesishiyagalombili ukuze usizakale ngalezi zibonelo.



Bhala amanothi anomsindolibanga **ongaphansi** kunalawa onikezwe wona ngezansi. Sebenzisa ubungako bamanothi obufanayo. Sebenzisa isithombe soqwembhezinkinobho sephiyano kusuka kwiworksheet yesishiyagalombili ukuze usizakale ngalezi zibonelo.



Khombisa ngendingilizi inothi eliphansi kunawo wonke esibonelweni ngasinye kulezi ezingezansi.



Bhala phansi inothimpawumbili kulezi zibonelo ezilandelayo. Sebenzisa ubungako benothi onikezwe bona.



Iworksheet yeshumi

Izinhloso:

1. Ukuqhubeka nokwazi ukubona amanothi angamanothimpawumbili;
2. Ukuqhubeka nokuzijwayeza ukubhala amanothi anamanothiphutha ngendlela efanele;
3. Ukuqhubeka ukwazi ukubona nokubhala imsingolibanga nezigamumsingolibanga;
4. Ukuzijwayeza ukubhala amaqoqo ahlanganisiwe ezingxenywe zamanothi asigqisinye ngendlela efanele.

Bhala amanothi angamanothimpawumbili alamaphimbo alandelayo.

U-D# uphinde abe

U-Db uphinde abe

U-E# uphinde abe

U-Fb uphinde abe

U-G# uphinde abe

U-Cb uphinde abe

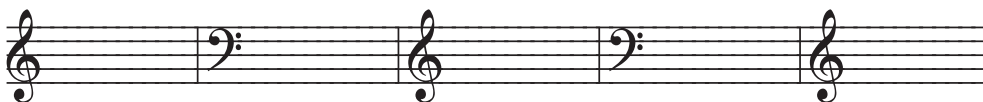
U-B# uphinde abe

U-Bb uphinde abe

U-F# uphinde abe

U-Gb uphinde abe

Bhala la manothi alandelayo ohlakeni lobhalomculo abe ngamanothi asigqisinye.



U-C# esikhaleni

U-Db kulayini

U-Ab esikhaleni

U-F# kulayini

U-G# kulayini

Faka inothiphutha enothini **lesibili** esibonelweni ngasinye kulezi ezingezansi ukwenza isigamumsindolibanga esiphezulu kunesokuqala.



Faka inothiphutha enothini **lesibili** esibonelweni ngasinye kulezi ezingezansi ukwenza isigamumsindolibanga esiphansi kunesokuqala.



Khombisa ngendingilizi inothi **eliphezulu** kunawo wonke esibonelweni ngasinye kulezi ezingezansi.



Bhala inothi eliwumsindolibanga **eliphezulu** kunaleli elinikeziwe ngezansi. Sebenzisa ubungako bamanothi onikezwe bona.



Ukuhlanganisa amaqoqo ezingxenywe zamanothi asigqisinye

Usufundile ukuthi amaqoqo ezingxenywe zenothi elisigqisinye
angahlanganiswa ndawonye,
kuye ngokuthi-ke idingani inkombasigqi.

Usufundile futhi ukuthi iziqu zamanothi ezingenhla kwalayini ophakathi
nendawo kufanele zibheke phansi.

Nokuthi futhi iziqu zamanothi angezansi komugqa ophakathi nendawo
kufanele zibheke phezulu.

Kwenzekani uma iqoqo lengxenywe yenothi elisigqisinye okufanele
lihlanganiswe ndawonye linamanothi aphantsi nangenhla kwalayini?
Iziqu zingabheka ngaphi?



Isisombululo . . .

Thola inothi eliqhele kunawo wonke kulayini ophakathi nendawo.
Indlela yesiqu salelo nothi sikhomba indlela yawo wonke amanothi
azohlanganiswa ndawonye kulelo qoqo.

Esibonelweni esingenhla:

Inothi eliqhele kunawo wonke kulayini ophakathi nendawo wu-G, kulayini
ophansi kunawo wonke.

Isiqu salo kufanele sibheke phezulu.

Ngakho-ke, lonke iqoqo lamanothi kufanele lihlanganiswe nemisila ibheke
phezulu.

Hlanganisa amaqoqo ezingxenywe zamanothi asigqisinye ngendlela eyiyo.



Iworksheet yeshumi nanye

Izinhloso:

1. Ukuzijwayeza izinhlobo ezahlukene izikhawumsindo ezingaba nazo;
2. Ukuzijwayeza umehluko phakathi kwezikhawumsindo ezinemvunge nezikhawumsindo ezinemvumelwanozindlela;
3. Ukuzijwayeza ukubala usayizi wezikhawumsindo.

Siyini isikhawumsindo esinemvumelwanozindlela?

Siyini isikhawumsindo esinemvunge?

Yiziphi izikhawumsindo eziphelele?

Yiziphi izikhawumsindo ezingaba zinkulu?

Uma isikhawumsindo esiphelele senziwe isigamumsindolibanga esisodwa esikhulu, siba yini?

Uma isikhawumsindo esiphelele senziwe isigamumsindolibanga esisodwa esincane, siba yini?

Uma isikhawumsindo esikhulu senziwe isigamumsindolibanga esisodwa esikhulu, siba yini?

Uma isikhawumsindo esikhulu senziwe isigamumsindolibanga esisodwa esincane, siba yini?

Isingeniso Esiyisisekelo Emkhakheni Womculo

Uma isikhawumsindo esikhulu senziwe izigamumsindolibanga ezimbili zincane, siba yini?

Bala usayizi walezi zikhawumsindo ezinemvunge ezilandelayo. Khumbula ukusebenzisa inothi elincane kunawo wonke njengendawo lapho uqala khona ukubala.



Iworksheet yeshumi nambili

Izinhloso:

1. Ukwazi ukubona nokuqala ukubhala izikhawumsindo ezinkulu neziphela kuze kufinyelele kwisikhawunothikugcina;
2. Ukuzijwayeza ukubhala indingilizi yama*fifths*;
3. Ukuzijwayeza ukubhala ukulandelana kwamanyusanothi namahlisanothi ohlakeni lobhalomculo lwamaphimbo aphezulu nakwizinkombanothi zebhesi;
4. Ukuzijwayeza ukubhala izikhawumanothi ezinkulu ezingenazo izinkombakhiye.

Bala usayizi walezi zikhawumsindo ezinemvunge ezilandelayo:



Bhala indingilizi egcwele yama*fifths* angezansi.

Isingeniso Esiyisisekelo Emkhakheni Womculo

Bhala wonke amanyusanothi ngokulandelana kwawo ezinhlakeni zobhalomculo ezingezansi. Khumbula le mvumelwano: **F**ather **C**harles **G**oes **D**own **A**nd **E**nds **B**attle.

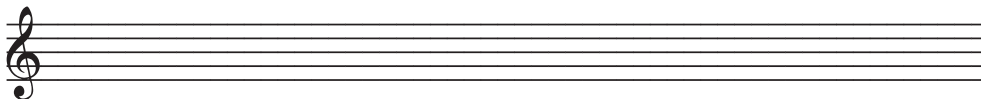


Bhala wonke amahlisanothi ngokulandelana kwawo ezinhlakeni zobhalomculo ezingezansi. Khumbula leyo mvumelwano engenhla **ISIPHENDULWE YABHEKA EMUVA.**

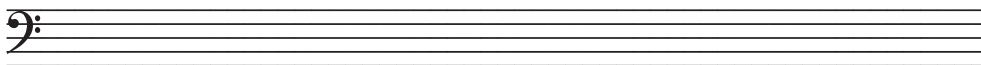


Bhala lezi zikhawumanothi ezilandelayo, uzibhale zingabi nazo izinkombakhiye ezinhlakeni zobhalomculo ezinikeziwe.

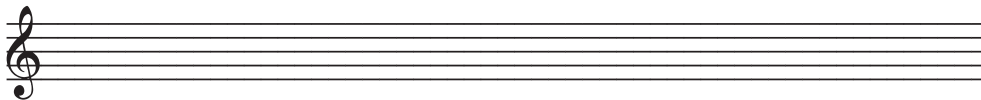
U-D omkhulu (uyakhuphuka)



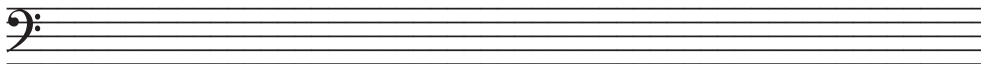
U-E omkhulu (uyehla)



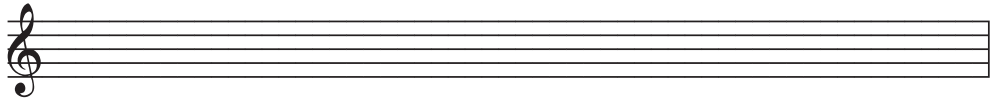
Inyusanothi elikhulu u-F (liyakhuphuka)



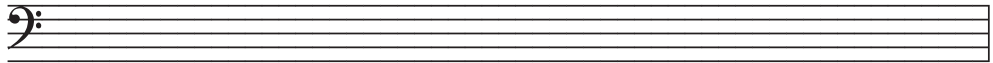
Ihlisanothi elikhulu u-E (liyakhuphuka)



Ihlisanothi u-D (liyehla)



U-F omkhulu (uyakhuphuka)



Iworksheet yeshumi nantathu

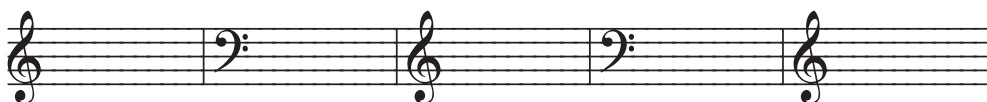
Izinhloso:

1. Ukuqhubeka nokwazi ukubona nokubhala izikhawumsindo ezinkulu neziphelele kuze kufinyelele kwisikhawunothikugcina;
2. Ukuzijwayeza ukuthola nokubhala izinkombakhiye ezithize;
3. Ukuzijwayeza ukubhala izikhawumanothi ezinkulu ezinezinkombakhiye nezingenazo izinkombakhiye.

Bala usayizi walezi zikhawumsindo ezinemvunge ezilandelayo.



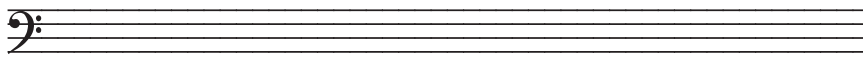
Bhala izinkombakhiye zalabo khiye abalandelayo:



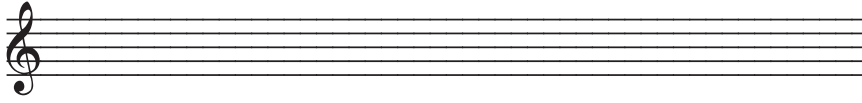
U-A omkhulu Ihlisanothi u-A elikhulu U-B omkhulu U-E omkhulu Ihlisanothi u-G elikhulu

Bhala lezi zikhawumanothi ezilandelayo:

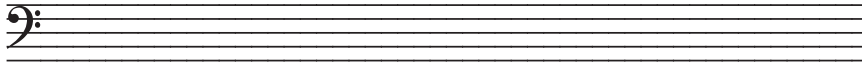
Isikhawumanothi esikhulu u-G esingenayo inkombakhiye (siyehla)



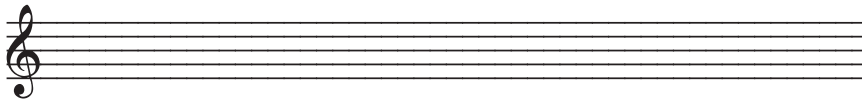
Isikhawumanothi esikhulu u-A esinenkombanothi (siyakhuphuka)



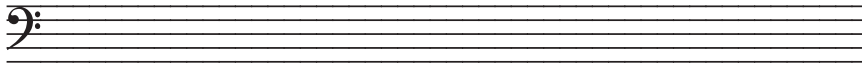
Isikhawumanothi esikhulu sehlisanothi u-G esingenayo inkombanothi (siyehla)



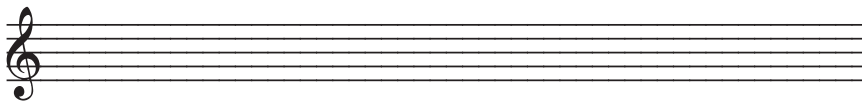
Isikhawumanothi esikhulu sehlisanothi u-A esinenkombanothi (siyakhuphuka)



Isikhawumanothi esikhulu u-B esingenayo inkombanothi (siyehla)



Isikhawumanothi esikhulu sehlisanothi u-G esinenkombanothi (siyakhuphuka)



Uhlu lwamagama

Lawa ngamatemu esiZulu omculo asetshenzisiwe kule ncwadi.

Accelerando	Uphawunyusakushesha
Accidental	Inothiphutha/inothimpazamo
Alla breve	Amanothizigqimbili amabili esigamini
Allegro	Ngomdlandla
Andante	Umnenso
Andantino	Umnensokushesha
Bar	Umgamu/ibha
Beat	Isigqi
Clef	Inkombanothi
Compound time	Inkombasikhathi engxube
Crescendo	Ukukhuphuka komsindo
Crotchet	Inothi elisigqisinye
Decrescendo	Umgamu omgqigqombili
Demisemiquaver	Ingxenyenanothi elisigqisinye
Diminished chord	Isixhamanothi esincishisiwe
Diminished interval	Isikhawumsindo esincishisiwe

Duple time	Umgamu omgqigqombili
Flat	Ihlisanothi
Frequency	Isivininimazamsindo
Half/whole scale	Isikhawumanothi ayisigamu napehelele
Hexatonic scale	Isikhawumanothisithupha
Imperfect cadence	Isixhamanothi
Metre	Ukuhamba ngesigqi
Metric	Okuhamba ngesigqi
Metromeno	Inkombasivini/ isikalisivini
Mezzo forte	Umyalelomfutho omaphakathi
Moderato	Umyalelosigqimaphakathi
Presto	Umyalelokushesha
Pulse	Umgqigqo
Quartad	Isixhamanothimane
Rallentando	Umyalelokunensa
Rest	Ubungakosikhathi sokuthula
Rhythm	Indidiyelosigqi
Rhythmic	Okunendidiyelosigqi
Scale	Isikhawumanothi
Semibreve	Inothi elizigqizine
Semiquaver	Ingxenyana yenothi elisigqisinye
Semitone	Isigamu somsindo ophelele
Sforzando	Umyalelokugcizelela
Sharp	Inyusanothi
Sing	Ukucula
Tempo	Isivini
Tenor	Inkombanothi yendlela yesithathu
Tenuto	Ithenutho

Tie	Isihlanganisimanothi
Time signature	Inkombasigqi
Tone	Umsindo libanga ophelele
Toneless	Okungebuculo
Tonic	Inothi lokuqala
Treble	Amaphimbo aphezulu
Treble clef	Inkombanothi yamaphimbo aphezulu
Tremelo	Ukuqhaqhazelisa izwi
Vivace	Umyalelomfutho

