

# Ukubala okungenamxholo

## Iinjongo zokufunda

- Ukudibanisa kunye nokuthabatha ukuya kuma 50 ( + , - , = , □ )
- Ziqhelanise neebhondi zamanani ukuya kwi 15
- Phindaphinda amanani ukuqala ku 1 ukuya kwi 10 nge 2 kunye ne 5 ( x , □ , = )
- Ukucazululwa kwamanani usebenzisa umgca-manani
- Udibaniso oluphindiweyo olukhokelela kuphindaphindo.
- Dibanisa inani elifanayo ngokuphindaphinda ukuya kuma 20.
- Phindaphinda inani u 1 ukuya ku 10 ngo 2.

Intshayelelo	
<p>Xelela abafundi ukuba bazokwenza umdlalo wokudibanisa kunye nokuthabatha.</p> <p>Umfundi omnye uzakubiza inani aze omnye umfundi atsho ukuba dibanisa x okanye thabatha.</p> <p>Umzekelo ndiqala nge 2. Umfundi olandelayo adibanise isi 5 umfundi olandelayo kufuneka aphenule 7 umfundi olandelayo athabathe isi 3 umfundi olandelayo athabathe isi 4 njalo njalo.</p> <p><b>Umzekelo</b> Buza abafundi ukuba kwenzeka ntoni kwinani leemengo emva kokuba zityiwe, ingaba zibaninzi okanye zibambalwa?</p>	
Izixhobo	Amagama amatsha
Imigca-manani yeklasi Izibali Itshati yamanani	<p><b>Dibanisa</b> – yongeza</p> <p>Phinda-phinda – yongeza ngokuphindiwe inani kabini, thathu</p> <p><b>Thabathu</b> – cutha</p> <p><b>Cazulula</b> - yahlula</p>
Indlela yokufundisa	
<p>Qhubeka usombulula ibali ugogo kunye nabazukulwana</p> <p><b>Buza abafundi</b> ukuba zingaphi iimengo zizonke? 15</p> <p><b>Abafundi</b> mabaxoxe igalelo lokutya iimengo kwinani lakuqala. (iimengo zingaphantsi)</p> <p>Hlalutya lombuzo (<b>zingaphi ezidingekayo ukuze zigqitywe</b>) kunye neklasi ngokubakhokela ngentsingiselo ka zigqityiwe. (0 ezishiyekileyo)</p> <p><b>Ingxoxo yeklasi yonke:</b> abafundi mabaxelele utitshala amakakubhale phantsi malunga necandelo a. <math>15 - 6 = 9</math> iimengo</p> <p>Ngoko, ukuzigqiba abazukulwana kufuneka bazitye zonke zoli 9.</p> <p>Icandelo b. abafundi mabasebenzi ngezibini ukufumana ukuba zingaphi ezishiyekileyo ukuba batye ezi 6 kwiimengo ezili 15. <math>15 - 9 = 6</math></p> <p><b>Udibaniso lokudibanisa kunye nokuthabatha.</b></p> <p><b>Umsebenzi wamaqela.</b> Beka abafundi ngamaqela esi 5 uze ubacele ukuba badibanise <math>45 + 17</math> basebenzise naziphi na indlela ezi 2.</p> <p><b><math>45 + 17 = 45 + 10 + 5 + 2</math>                      <math>45 + 17 = 45 + 10 + 7</math>                      <math>45 + 17 = 40 + 10 + 5 + 7</math></b></p>	

**Abanye bazokusebenzisa imigca manani.**

**Abafundi kufineka bachaze indlela abayisebenzisileyo kunye nezizathu**

**Izizathu kufuneka ibezezi** (inani elahluliweyo, ukusebenzisa iibhondi zamanani, ukudibanisa kwi 5s kumgca manani osetyenzisiweyo.)

**Biza amaqela ama 2 ukuba babonise iklasi eyabo indlela**

**Xelela abafundi** ukuba ukudibanisa kungenziwa ngokusetyenziswa amaqhinga ohlukeneyo bhekisa kwezichanekileyo eziboniswe ngabafundi

**Bonisa abafundi ukuba ukuqhekeza amanani kungalula njani**

**45 + 17**

45 = 4 amashumi kunye 5 imivo kunye 17 = 1 ishumi and 7 imivo

**Dibanisa**

Bonisa lomzekelo ungentla usebenzisa amanani.

$$\begin{aligned} 40 + 5 + 10 + 7 &= 40 + 10 + 5 + 7 \\ &= 50 + 12 \\ &= 50 + 10 + 2 \\ &= 62. \end{aligned}$$

**Thatha ixesha lokuqaphela nakuphi na ukungaqondi kakuhle okuphawulweyo xa abafundi bebonisa umsebenzi wabo.**

Cela abafundi ukuba bacacise lentethi ingentla ngaphandle kokufumana ipendulo yombuzo limpendulo kulwazi lokuqala ingazezi

1. ukusebenzisa udibaniso oluphindiweyo
2. ukubala ngezi 5s
3. 2 amaqela e ()

Xelela abafundi ukuba bazakugxila kwinani elinye elidityaniswe kabini.

$$5 + 5 = \text{kabini } 5$$

$$6 + 6 = \text{kabini } 6$$

$$7 + 7 = \text{kabini isixhenxe.}$$

gxininixxa ukuba UKUDIBANISA inani kuthetha ukuba dibanisa inani elinye kabini okanye phindaphinda ngesi-2 nangaphezulu.

**Umsebenzi**

**Iphepha 135**

1. Sebenzisa umgca-manani ukuziqhelisa utsiba ngama-10 nangezi-5 ukuqala ku-20 ukuya kwi-180.

**Impendulo yomfundi**

2. Zenzele ngokwakho amanani oza kutsibela kuwo: zoba umgca-manani kwincwadi yakho. **Impendulo yomfundi**

Tsiba ngama-10 nangezi-5 uqala kumanani awohluka-hlukileyi aphakathi kuka-0 ne – 180. Zama nokutsiba ubuya umva ukuze uyenze ibe nomdla.

**Impendulo yomfundi**

**Ukubala okungenamxholo: Umsebenzi****Iphepha 136**

1. Masisebenze amacebo ohlukileyo namhlanje. Khetha olithandayo uze ubonise icebo olisebenzisileyo.

a. $16 + 13 =$ <u>29</u>	b. $15 + 12 =$ <u>27</u>
c. $20 + 10 =$ <u>30</u>	d. $30 + 20 =$ <u>50</u>

2. Bhala iimpendulo ubonisa icebo elahlukileyo

a. $27 - 5 =$ <u>22</u>	b. $29 - 23 =$ <u>6</u>	c. $45 - 22 =$ <u>23</u>
d. $40 - 20 =$ <u>20</u>	e. $50 - 30 =$ <u>20</u>	f. $46 - 12 =$ <u>34</u>

3. Bhala iimpendulo

	i-10 ingaphezulu kuka	Isi-3 ngaphantsi kuka	Isi-4 ngaphezulu kuka	Isi-5 ngaphantsi kuka
<b>Umzekelo: 28</b>	<b>38</b>	<b>25</b>	<b>32</b>	<b>23</b>
<b>25</b>	<b>35</b>	<b>22</b>	<b>29</b>	<b>20</b>
<b>36</b>	<b>46</b>	<b>33</b>	<b>40</b>	<b>31</b>
<b>47</b>	<b>57</b>	<b>44</b>	<b>51</b>	<b>42</b>
<b>58</b>	<b>68</b>	<b>55</b>	<b>64</b>	<b>53</b>

**Ukuziqhelanisa nokuzimela**

1. Ziqhelanise emethini:

Nika abafundi amathuba kangangoko unakho ukuba bahlele amakhadi amanani ngendlela yokwenyuka kunye neyokwehla.

Sebenzisa izinto zokubala ukuhlaziya ukudibanisa kunye nokuthabatha ngaphakathi kwama 20.

2. ukubala ngomlomo:

Bala ubheka phambili uphinde ubuye umva kwimigca manani.

**Ukwahlula**

Imisebenzi ekwinqanaba eliphezulu

Vumela abafundi ukuba baphonononge iziphindaphindo kumgca manani kwaye bawahlele ngendlela yokwenyuka kunye neyokwehla.

**Ukuqokumbela**

Ukucinga kunye nengxelo:

- Ukucinga ngokwamaqela: emva kwemisebenzi, qokelela abafundi bonke ukuxoxa ngamava wabo. Buza imibuzo enje ngale, "Yintoni oyifumanise ilula okanye iinzima malunga nokubala namhlanje?" kwaye kuncede njani ukusebenzisa imigca manani?
- Ingxelo kunye nezilungiso:

Nceda abafundi malunga nomahluko phakathi kwendlela yokwenyuka kunye nendlela yokwehla nokuthi ubabonise uqhagamishelwano phakathi kwendlela yokwenyuka kunye nokudibanisa, kunye nendlela yokwehla kunye nokuthabatha.

**Ukucazululwa kwamanani**

Ibali lika Mashudu:

Mashudu ngoku udibanisa ulwazi analo lokuqheza amanani nemigca-manani ukuze abone ukuba amanani akhiwa njani kusetyenziswa loo manani aqhekeziweyo.

Ukusebenzisa umgca-manani ukuze uqhekeze amanani kukunceda ubone indlela akhiwe ngayo amashumi nemivo.

Dibanisa kwaye uthabathe izibalo ngokuthi ucazulule inali lesibini.

4. a.  $23 + 45$  (yongeza amashumi)  $23 + 40$   
 $= 63 + 5$  (yongeza imivo)  
 $= 68$
- b.  $47 + 26$  (yongeza amashumi)  $47 + 20$   
 $= 67 + 6$  (yongeza imivo)  
 $= 60 + 10 + 3$   
 $= 73$
- c.  $58 - 23$  (thabatha amashumi)  $58 - 20$   
 $= 38 - 3$  (thabatha imivo)  
 $= 35$
- d.  $38 - 25$  (thabatha amashumi)  $38 - 20$   
 $= 18 - 5$  (thabatha imivo)  
 $= 13$

**Umsebenzi****Iphepha 137**

Sebenzisa umgca-manani ukuqhekeza la manani alendaleyo abe ngamashumi nemivo.

35	43	63	72
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**Impendulo zabafundi****Indlela zokudibanisa nokuthabatha****Iphepha 138**

Ibali lika Makhulu nabazukulwana:

Abazukulwana bakaMakhulu bazokwazi ukuba zingaphi iimengo ezishiyekileyo emva kokuba zityiwe ezinye. Masisebenze amacebo ohlukileyo okudibanisa nokuthabatha ukuze sisombulule iingxaki zokwenyani ezifana nale yabo.

**Umsebenzi**

- Masithi baneemengo eziyi-15 kwaye batye eziyi-6
  - Zingaphi iimengo ekusafuneka bezityiwe ukuze bazigqibe? **Impendulo yomfundi**
  - Zingaphi ezishiyekileyo? **Impendulo yomfundi**
- Gqibezela ezi zibalo
  - $6 + \underline{9} = 15$
  - $15 - 6 = \underline{9}$

**Umsebenzi**

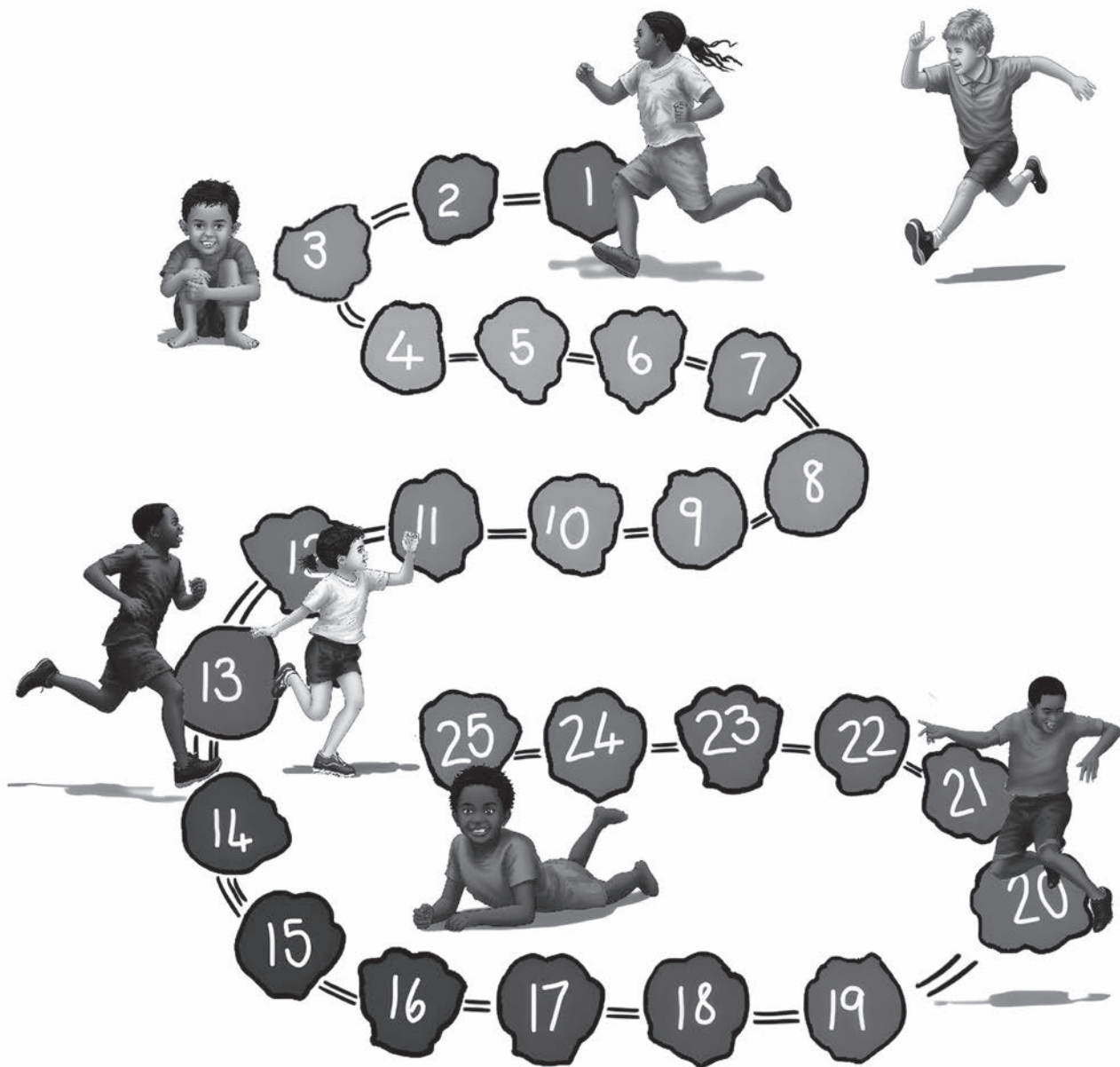
**Iphepha 139**

1. Qala ngama – 35, udibanise i – 10, uze uthabathe i 10. Uphele uneliphi inani? **Impendulo 35**
2. Qala ngama – 45, udibanise ama-25, uze uthabathe i 10. Uphele uneliphi inani? **Impendulo 60.**

**Ungenelelo**

Sebenza ngamanani ekujoliswe kuwo, abafundi bangahlola iindibaniselwano ezahlukeneyo ezenza elonani. Yindlela ebonakalayo yokubona ukuba amanani angacazululwa abezizinto ezahlukeneyo

**umsebenzi owongeziweyo:** nika abafundi imibuzo ngeebhondi zamanani equka **epheleleyo eyaziwayo, inxalenye eyayikho**



# Ukufunda izibalo ngamanye nje amaqhinga

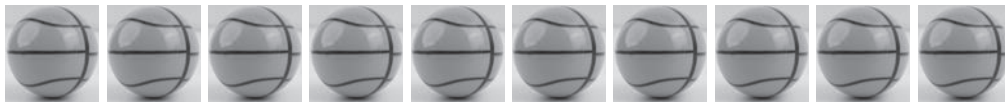
## Injongo zokufunda

- o Ukuqonda ukubala kunye neebhondi zamanani
- o Ukwakha ukuchebeleza iibhondi zamanani
- o Indlela yokwakha amanani (iibhondi) neemfihlo zamanani

### Intshayelelo

Ukuqonda ukubala kunye neebhondi zamanani.

Sebenzisa nasiphi na isixhobo sokufunda eklasini abafundi benze izibalo sodibanisa amaqela esixhobo.



Babuze zingaphi iibhola?

Cela abafundi bakhe iibhondi ze-10 = ishumi

Abanye bazokubhala  $2 + 2 + 2 + 2 + 2$  abanye  $5 + 5 = 10$

Khokela abafundi ngokuthi ubabuze umbuzo. Mangaphi amaqela eebhola ezibini owabonayo.

Buza abafundi leliphi inani eliphindwayo xa udibanisa kwaye uqhagamshela amaqela mangaphi amatyeli ama-5?

### Izixhobo zokufunda

- Isiseko seebhloko ezilishumi
- Iitshati zexabiso lendawo
- Ibhodi kunye neemaka
- Amakhadi amanani (0-9)
- Iphepha lokubala
- idayisi (akunyanzelekanga)

### Indlela yokufundisa

**Cela abafundi bathathe onetsheluzo bamagama amanani. Phinda ubacele banike amagama amanani enani phakathi kwa 20 kunye ne 100.**

**Bhala oku kulandelayo ebhodini kwaye ubize abafundi aba 3 ukuba beze ngaphambili babhale amagama amanani.**

27 –ngamashumi amabini anesixhenxe

83 ngamashumi asibhozo anesithathu

100 likhulu elinye ( **gxininisa ekubizeni ngokuchanekileyo ayilokhulu**)

Bhala igama lenani ikhulu elinye linamashumi amathathu anesihlanu ebhodini. Khetha abafundi babhale isimboli yenani 135.

**Bonisa abafundi ukuba sinwo njani ngoku amanani anee dijithi ezi 3.**

**nye – ikhulu KUNYE namashumi nexabiso leyunithi yindlela echanekileyo yokubiza inani ngamakhulu abafundi mabaziqhelanise ngokuthetha oku kulandelayo ngokuchanekileyo.**

118 ngu likhulu kunye.....

105 ngu likhulu kunye.....

142 ngu likhulu kunye.....

**Ukwakha ukuchebeleza kwiibhondi zamanani**

**Qala ngokwenza abafundi** babengamaqela uze ubacele babhale iibhondi zamanani ze 10 abazaziyo

$$9 + 1$$

$$8 + 2$$

$$7 + 3$$

$$6 + 4$$

$$5 + 5$$

**Nokubuyisela umva amanani njengoko esanika I 10.**

**Cela abafundi** ukuba bamele lamanani mabini ngamakhuni baze babonise lamanani mabini ngemibala emibini eyahlukeneyo

**Umzekelo** unikiwe ngezantsi

7 kunye ne 3 zoba amakhuni asi 7 ngombala omnye kwaye nemi 3 ngomnye umbala

Bonisa abafundi ukuba ukuthabatha/ ukususa kusebenzisa njnai iibhondi zamanani

Bonisa ukuba amakhuni ewonke ali 10 . kodwa ukuthabatha umbala ubemnye wekhuni kusinika omnye umbala .

Okokugqibela bhala isimboli yenani njengale

$$7 + \underline{3} = 10 \text{ kunye } 10 - \underline{3} = 7 \text{ or } 10 - 7 = \underline{3}$$

**Ingcebiso zika titshala:**

Obona buchule bunzima kwiibhondi zamanani ngokupheleleyo bunikwe indawo enye engekho. Abafundi kufuneka baziqhelise ngokwaneleyo ngezinye izinto okanye bazakuzama ngokulula ukudibanisa amanani amabini

okokugqibela

bhala izibini ebhodini ngaphandle kokusebenzisa igama isibini

$$5 + 5$$

$$6 + 6$$

$$7 + 7$$

**Umsebenzi****Iphepha 144**

a.  $66 + 7 = 73$

b.  $38 + 4 = 42$

c.  $28 + 3 = 31$

d.  $90 + 5 = 95$

e.  $99 + 2 = 101$

## Umsebenzi

Iphepha 145

1. Bhala iimpendulo. Sebenzisa amanani adibana enze elithile kwimivo

a. $26 + 13 = \underline{39}$	b. $46 - 12 = \underline{34}$
c. $51 + 8 = \underline{59}$	d. $43 + 7 = \underline{50}$

2. Bhala iimpendulo. Sebenzisa amanani adibana enze elithile kumashumi.

a. $30 + 40 = \underline{70}$	b. $20 + 60 = \underline{80}$
c. $10 + 50 = \underline{60}$	d. $30 + = \underline{50}$

3. Bhala iimpendulo kuphela. Zama izakhono zokubala uqhuebeka, uthlekisa amanani.

a.

Ngaphezu ngesi- 2	
68	<b><u>70</u></b>
29	<b><u>31</u></b>
45	<b><u>47</u></b>
38	<b><u>40</u></b>

b.

Ngaphezu ngesi- 5	
40	<b><u>45</u></b>
25	<b><u>30</u></b>
70	<b><u>75</u></b>
43	<b><u>48</u></b>

c.

Ngaphantsi ngesi- 4	
45	<b><u>41</u></b>
16	<b><u>12</u></b>
28	<b><u>24</u></b>
32	<b><u>28</u></b>

d.

Ngaphezulu ngesi- 3	
53	<b><u>56</u></b>
41	<b><u>44</u></b>
64	<b><u>67</u></b>
58	<b><u>61</u></b>

## Ungenelelo

Qhelanisa abafundi basebenze ngokuzimela, bafunde uhlolo olwenziwayo kwisihloko, ubaqhelanisa ngababini kunye nomsebenzi weqela.

- Kubafundi ababamba ingqiqo ngokukhawuleza, banike umceli mngeni ngokwandisa inani lezinto okanye ngokwazisa amaqela amakhulu, njengamashumi.

## Isiphelo

Esi sicwangciso sesifundo sikhokelela abafundi kwiziseko zeebhondi nokubala ngokuchanekileyo kusetyenziswa iindlela zonxibelelwano kunye nezandla ezisebenzisanayo. Iyabakhuthaza abantwana ukuba babuqonde kakuhle ubungakanani bamanani kunokuba bathembele kakhulu kwinkqubo yezibalo ukuze bafumane impendulo. Iyabanceda ngokwenza izibalo bedibannisa izinto eziphathekayo ngezandla ukunceda ukukhumbula.

# Ukusombulula izibalo ngokwemeko

## Iinjongo zokufunda:

- Sombulula iingxaki ngokomxholo kwaye ucacise izisombululo kwiingxaki.
- Ukudibanisa kunye nokuthabatha
- Ukudibanisa okuphinda-phindiweyo okukhokelela kuphinda-phindo
- Ukwenza amaqela alinganayo kunye nokwabelana okukhokelela kulwahlulo olunokuthi lubandakanye intsalela
- Ukusombulula iingxaki zemali ezibandakanya itotali kunye notshintsho

### Intshayelelo

Cela abafundi ukuba babale nge 2s, 3s, kunye ne 5s. ukuya kumatyeli ali 10

Sebenzisa umgca manani ukubonisa ukubala uze ucele abafundi waqaphele amatyeli okutsiba.

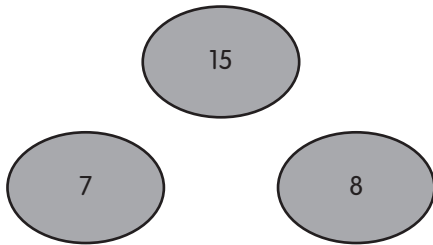
Xelela abafundi ukuba ukutsiba ngamanani amaxesha apho inani longezwe khona

Abafundi maqhelise amanani adityaniswa enze elithile nomhlobo ukusukela ku – 0 uyotsho ku- 20.

Umzekelo:  $15 = 7 + 8$

okanye

$15 = 10 + 5$



### Izixhobo

Imali ezingqekembe  
Imali engama -phepha

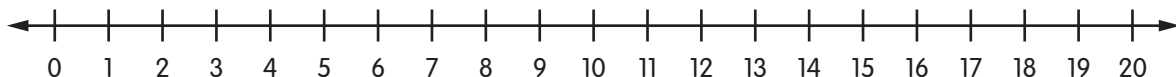
### Amagama amatsha

**imali: iingqekembe, okanye amaphepha ezisetyenziswa ukubhatalela izinto kunye neenkonzelo.**

**C = yicenti:** aiyunithi yemali elingana nekhulu lemali engundoqo iyunithi (njenge Randi)

### Isikhokelo/indlela/iqhinga

**Zoba** umgca manani ebhodini njengokuba kubonisiwe ngezantsi



**Buza** abafundi ukuba sibala ngantoni? **2s**

**Cela** abafundi ukuba babhale izibalo zikadibanisa zomgca manani  $2 + 2 + 2 + 2 + 2 = 10$

Khetha nokuba ngowuphu umfundi ukuba axelele ikhosi mangaphi amaqela ezi 2s akhoyo 5

**Izibini mazisebenze** ukugqibezela lentetho (umgca manani ubonisa \_\_\_amaqela e \_\_\_)

**Imp** 5 amaqela ezibini 2.

Ngelishesha zoba lomfanekiso ungezantsi



**Kuqokumbela kubafundi** ukuba  $2 + 2 + 2 + 2 + 2 = 5$  amaqela ezi 2

Ingxoxo ngomzekelo womsebenzi u Lebo usebenzisa iziphinda-phindo.

Chaza igama elitsha **Ukuphinda-phinda** nje ngokudibanisa okuphindaphindiweyo/ ukongeza inani elinye kaninzi.

Qiniseka ukuba abafundi banika ingqwalasela kwinani lemiqolo

Umqolo 1 = 2

Umqolo 2 = 2 + 2

Umqolo 2 = 2 + 2 + 2

Usebenzisa ithebhile bonisa abafundi ukuba sibala nge 2s kunye nama 10 imiqolo izakuba nee kherothi ezingama 20 zizonke nezifumaneka ngokuphindaphinda ukudibanisa inani leekherothi kumqolo 1+ mqolo 2 +mqolo 3

Inani lemiqolo lingalinganiswa nenani lamaqela.

Cela abafundi bafumane ukuba njani umzekelo

Mqolo 4 =  $2+2+2+2= 4 \times 2$

Mqolo 8 =  $2+2+2+2+2+2+2+2=8 \times 2$  ( yongeza isi 2 uphindaphinda amatyeli asi 8 ) kungoko  $8 \times 2$

Xelela abafundi ngamagama alula ukuphindaphinda buza ukuba ngamatyeli mangaphi ekongezwa kuwo into enye.

NB: gxininisa kwinani lamatyeli inani lisongezwa ngokuphindaphindiweyo linani lokuqala sibeka uphawu **X**.

**Ngoku: buyela umva kumzekelo abafundi babone ukuba iimiqolo kulemeko ngamaqela.**

**$2 + 2 + 2 + 2 + 2 = 5$  amaqela ezi 2 (ngoba siphindaphinda ukongeza isi 2, 5 amayeli.**

**Ngoko  $2 + 2 + 2 + 2 + 2 = 5$  amaqela ezi 2**

$$= 5 \times 2$$

$$= 10$$

**Qhubekeka nesifundo** ngokuthi wongeze isi 4 ngokuphindaphindiweyo uyokuma kwi 10

**Cela abafundi** ukuba babhale iziphindaphindo zodibaniso oluphindaphindiweyo

Nika abafundi eminye imizekelo ukuqinisekisa ukuba bayawuqonda umxholo wo dibaniso oluphindaphindiweyo njengesiphindaphindo.

1.  $7 + 7 + 7 + 7 + 7 = 5 \times 7$

2.  $6 + 6 + 6 = 3 \times 6$

Umsebenzi

Iphepha 147

1. Gqibezela amanani adityaniswa enze ama-20

$6 + \underline{\quad} \mathbf{14} \underline{\quad} = 20$	$8 + \underline{\quad} \mathbf{12} \underline{\quad} = 20$
$13 + \underline{\quad} \mathbf{7} \underline{\quad} = 20$	$\underline{\quad} \mathbf{5} \underline{\quad} + 15 = 20$

2. Inxalenye yamanani awenza elithile

20	
12	8

12	
14	6

20	
2	18

**Impendulo yomfundi**

3. Sebenzisa amakhuni okudibanisa ukuze wenze amanani adityaniswa enze elithile ukuyotsho kwi-15

<b>+</b>	Ukwazi ngokukhawuleza ukudibanisa nokuthabatha amanani	
	1. $12 + 5 = 17$	2. $11 + 2 = 13$
	3. $9 + 6 = 15$	4. $8 + 3 = 11$
	5. $15 + 4 = 19$	6. $19 - 17 = 2$
	7. $17 - 5 = 12$	8. $16 - 9 = 7$
	9. $14 - 8 = 6$	10. $18 - 4 = 14$

**Dibanisa, yohlula-hlula**

**Iimpendulo yemisebenzi Yokuphinda-Phinda**

**Iphepha 152**

1. Bhala isibalo sokudibanisa ngokuphinda-phinda nempemndulo.

- a.  $24 + 2 + 2 + 2 + 2 + 2 =$   
 **$5 \times 2 = 10 \rightarrow 24 + 10 = 34$**
- b.  $9 + 3 + 3 + 3 + 3 + 3 =$   
 **$5 \times 3 = 15 \rightarrow 9 + 15 = 24$**
- c.  $35 + 5 + 5 + 5 + 5 + 5 =$   
 **$5 \times 5 = 25 \rightarrow 35 + 25 = 60$**
- d.  $30 + 10 + 10 + 10 + 10 + 10 =$   
 **$5 \times 10 = 50 \rightarrow 30 + 50 = 80$**

2. Bhala isibalo sokuphinda-phinda sesi sibalo sokudibanisa kuphinda-phindwa:  $5 + 5 + 5 + 5 + 5 + 5 = 6 \times 5 = 30$

3. Bhala isibalo sokudibanisa kuphinda-phindwa sesi sibalo:  $8 \times 6 = 6 + 6 + 6 + 6 + 6 + 6 + 6 = 48$



# Ukusombulula iingxaki zezibalo

## Ngoku yaziza ngokwabelana okukhokelela kukwahlula

**Qala ngophinda-phindo** kodwa usebenzisa **igama amaqela** ukunceda abafundi ukuba baqonde ukuba sizakuwafumana njanito amanani ezinto kwiqela.

Cela abafundi ukuba bazobe umfanekiso wamaqela ama 4 ezi 3 = 12



Sebenzisa umzekelo wokwabelana ozakunika abafundi ipatheni efanayo nale ingentla

**Beka abafundi ngokwamaqela ama 4.** Nika iqela ngalinye **12 izinto zokubala** ubacele babelane ngezinto zokubala bebonke.

Buza abafundi ukuba zingaphi izinto zokubala ezifunyenwe ngumntu emnye? 4

Cela abafundi bazobe umfanekiso yezinto zokubala ababelene ngazo (bangasebenzisa izangqqa, nayiphi na imilo ukumela umfundi)



Cela abafundi ukuba bathelekise **ukwabelana ngezinto zokubala** kunye namaqela ama 4 ezi 3

**Xa bebesabelana ngezinto zokubala ezili 12, bafumene amaqela ama 4 ezi 3.**

**Ingxoxo yeklasi** abafundi babelane njani ngezinto zokubala

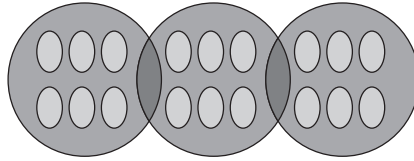
**Cacisa** ukuba xa bebesabelana ngezinto zokubala, benze amaqela kwaye umfundi ngamnye unezinto zokubala ezilinganayo.

**Yazisa ngegama elitsha ukwahlula**

**ukwahlula** kumalunga nokwabelana ngokulinganayo okanye ngokwenza amaqela ezinto ngokulinganayo. Cinga ngayo njengokubeka izinto ngokwamaqela alinganayo.

**Sebenzisa umzekelo owenziweyo** ukubonisa ukuba impawo yokwahlula isetyenziswa njani .

Ukuba kukho iimbewu ezili 18 kunye neenbhegi ezi 3, zingaphi iimbewu kwibhegi nganye?



**Khokela abafundi malunga nokufumana izibalo zokwahlula.**

1. chonga inani elipheleleyo lokwahlula (18)
2. fumana ukuba mangaphi amaqela owadingayo (kumzekelo zi 3 ( 3 iibhegi)
3. zoba umfanekiso onamanani amaqela
4. nika iqela ngalinye izinto ezilinganayo kude kungabikho ishiyekayo 0 okanye ezingaphantsi zingabelwa amaqela

NB: abafundi kufuneka baqonde ukuba intetho yokwahlula iqala ngenani elikhulu.

Sebenzisa lomzekelo ungentla

18 iimbewu zizakwabelwa kwiibhegi ezi 3

Bonisa abafundi ukuba iibhegi ezi 3 ngamaqela esiwadingayo.

Cela abafundi ukuba babe iimbewu ezili 18 kwiibhegi ezi 3

intetho  $18 \div 3 = 6$  akukho nto ishiyejayo.

**Xelela abafundi ukuba ngamagama alula  $18 \div 3$  uthetha ukuba amaqela ali 18 kumaqela ama 3**

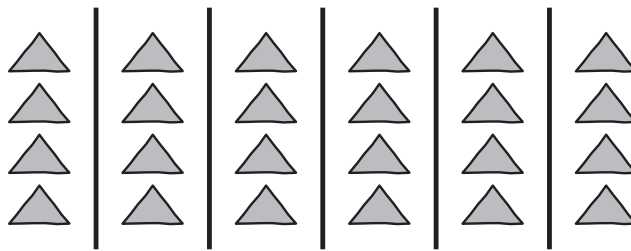
**Ngoku bonisa abafundi umzekelo onentshiyekela.**

**Umsebenzi wezibini:** nika izibini izinto zokubala zibe li ukuba babelane ngazo kwaye ugxininise ukuba kufuneka bobabini bafumane izinto zokubala **ezilinganayo**

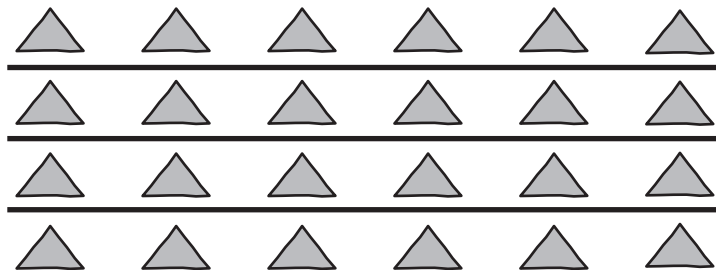
**Ingxoxo yeklasi:** buza amaqela ngokungahlelwanga ukuba zingaphi izinto zokubala ezifunyenwe ngumfundi emnye? 2

Buza abafundi ukuba zikhona na izinto zokubala ezishiyekileyo kwaye kutheni? (kushiyeke enye engenokwazi ukwahlulwa phakathi kwe 2).

Ngqamanisa oku kumzekelo we Vatala kwincwadi yabafundi ukwazisa umxholo **wento eshiyekileyo.**



Umsebenzi wezibini: cela abafundi ukuba basebenzise kwalomfanekiso ufanayo kodwa kwelityeli benze amaqela ukusuka ekhohlo ukuya ekunene njengokuboniswe kumfanekiso ongezantsi (ungenelelo lukatitshala luyadingeka.)



Sebenzisa ipeni eyahlukileyo kumzobo omnye kwaye wenze amaqela ngezi 6s.

**Ingxoxo yeklasi** cela abafundi ukuba babale inani loonxantathu kwelokuqala kunye nelesibini iqela (24)

**Abafundi** mababhale ingxelo icala ngecala

**4 amaqela esi 6 = 24      kunye      6 amaqela esi 4 = 24**

Ukongeza isi 6 amatyeli amane kuyafana nokongeza isi 4 amatyeli amathandathu.

Bhala lengxelo

$30 \div 6$  ebhodini

Buza abafundi ukuba ingxelo ithetha ukuthini (**beke ama 30 ngokwamaqela asi 6**)

Zoba umfanekiso ukubonisa oku kungentla (**icebiso**) kuqala bhala izangqa ezintandathu okanye ubeke izikhongozeli uze uqalise ukwahlula)

**Ingebisiso kutitshala:** labafundi bangasebenzisa nayiphi na indlela yokubala ukwahlula ngokwamaqela.

### Usombulula ingxaki zemali

Cela abafundi ukuba bachaze iingqekembe zoMzantsi Afrika kunye nemali engamaphepha abayaziyo apho bayisebenzisa khona imali.



Ulwazi lomfundi lungahluka kodwa lizoquka i R1, R2, R5, R10, R20, R50, R100, R200, 1c, 5c, 10c, 20c, 50c

Cela abafundi ukuba bachaze ukuba kwenzeka ntoni xa bebhatala izinto evenkileni ngemali. (bhatala izinto kwaye ufumane itshintshi ukuba awubhatelanga ngemali echanekileyo).

Yenza abafundi ngokwamaqela baze baxoxe kwaye babhale phantsi ukuba zingaphi i 1c, 5c, 10c 20c, 50c, kwi 1 Randi.

**Cacisa ukuba R1.00= 100c.**

**Nika abafundi imali esikiweyo engamaphepha ahlukeneyo kunye neengqekembe** uze usebenzise itafile katiitshala njengevenkile ibenezinto ezahlukeneyo ezithengiswayo. Iincwadi, iipeni, ipensile, iirabha.

Vumela abafundi ukuba beze evenileni bazokuthenga kodwa kufuneka babale itshintshi yabo ngokwabo.

**Ukusombulula iingxaki zophindaphindo kunye nokwahlula**

**Sebenzisa umzekelo owenziweyo** (uhlaziyo kwisifundo esidlulileyo)

**Ingxoko yeklasi:** cela abafundi ukuba bachaze umfanekiso ongezantsi ngendlela yamaqela athe nkqo. Kukho amaqela ama 6 ezi 4.

### Umsebenzi

**Iphepha 154**

1. Molly unee R5 ezi-3, ii-R10 ezi-2 ne R20 e-1

- Ngaba unemali eyoneleyo ukuthenga ibhegi yeepensile ebiza iR38? **Impendulo: Ewe - yi R55 iyonke.**
- Bonisa indlela oyifumene ngayo impendulo. **Impendulo  $3 \times R5 + 2 \times R10 + 1 \times R20 = 55$ .**

2. R12 (R50 – R38)
- 3 a. R3  
b.  $R80 - 72 = R8$  itshintshi
4. iikliphu zihafu ze  $R72 = R36$ , sebenzise I  $1/3$  yetshintshi ( $36 \div 3$ ) is R12  
lyonke inkcitho =  $R36 + R12 = R48$   
Itshintshi =  $R72 - R48 = R24$

**Ungenelelo**

Ukuziqhelanisa nokuzimela, ukuhlola okuyakwenziwa, ziqhelanise ngezibini okanye umsebenzi wamaqela

**Imisebenzi eyongezelelweyo:**

1. Bhala isibalo sokudibanisa ngokuphinda-phinda nempendulo.  
a. 26; 28; 30; 32  
b. 11; 14; 17; 20  
c. 40; 45; 50; 55  
d. 40; 50; 60; 70
2. Bhala isibalo sokuphinda-phinda sesi sibalo sokudibanisa kuphinda-phindwa:  
 $5 + 5 + 5 + 5 + 5 + 5 = 30$
3. Bhala isibalo sokudibanisa kuphinda-phindwa sesi sibalo:  $8 \times 6 = 8 + 8 + 8 + 8 + 8 + 8 = 48$

**Amaqhezu: limpendulo zemisebenzi yamaqhezu****Iphepha 156**

Le misebenzi isekwe kumfanekiso wepitsa apho abafundi babelana ngayo ngokulinganayo.

1. uSoso no Inga babelana ngepitsa:  
Ipitsa isikwe yangamaqhezu amabini alinganayo.  
**Bayisike baba zimbini. Umntu ngamnye ufumana  $\frac{1}{2}$ .**  
**limpawu :  $\frac{1}{2}$**
2. uSoso uyitya yedwa ipitsa:  
Uzakutya yonke ipitsa.  
**Ufumana  $\frac{2}{2} = 1$  epheleleyo.**
3. uSoso, uLwando noSipho babelana ngepitsa:  
Ipitsa yahlulwe yaba maqhezu mathathu alinganayo.  
**Umntu ngamnye ufumana  $\frac{1}{3}$ .**  
**limpawu :  $\frac{1}{3}$**
4. Elona qhezu likhulu:  
Xa sithlekisa  $\frac{1}{2}$ ,  $\frac{1}{3}$ , kunye ne  $\frac{1}{4}$ ...
- Elona qhezu likhulu ngu  $\frac{1}{2}$ .**

# Umlinganiselo/imassi

## Injongo yokufunda: Umthamo

- Ukwazisa ngomlinganiselo osesikweni: ilitha, nemili-lita
- linganisela, rekhoda umthamo wezikhongozeli ngokusebenzisa imilinganiselo esemgangathweni
- Bhala umthamo wezinto ezipakishiweyo zorhwebo
- Sombulula iingxaki zamagama ngokomxholo kwaye uchaze izisombululo kwiingxaki

Intshayelo	
<p>Umthamo</p> <p>Xelela abafundi malunga nenkwenkwe eyayinxaniwe kakhulu yaye ifuna ukusela amanzi.</p> <p>Beka iibhotile zibentathu phezulu kwetafile ibeyi 1L enye kunye ne 500ml ezi 2.</p> <p>Qinisekisa ukuba kukho i 500ml kwibhotile eyi 1L.</p> <p>Ezi bhotile zintathu zizakubanje ngezi zilandelayo</p> <p>Ibhotile 1 1L ene 500ml kuyo Ibhotile 2 – 500ml engcweleyo ibhotile 3 – engenanto 500ml</p>	
Izinto/izixhobo	Amagama amatsha:
<p>Umthamo</p> <p>likomityi, amacephe, iibhotile ze 500ml, iijagi</p> <p>zokulinganisela, iibhotile ze 1 L</p>	<p>Ilitha</p> <p>imililitha</p>
Indlela yokufundisa	
<p>Beka iibhotile ezinemithamo eyahlukeneyo. Ezi bhotile zintathu zizakubanje ngezi zilandelayo</p> <p><b>Ibhotile 1 1L</b> ene 500ml kuyo      <b>Ibhotile 2</b> – 500ml engcweleyo      <b>Ibhotile 3</b> – engenanto 500ml</p> <p>Qhubeka nebali kwintshayelelo</p> <p><b>Buza abafundi</b> ukuba yeyiphi ibhotile abacinga ukuba inkwenkwe iyikhethile. (lindela isininzi sabafundi sithi ukhethe u 500ml ogcweleyo)</p> <p><b>Phanda abafundi</b> ukuba kutheni bekhetha lebhotele? (abafundi bazakucinga ukuba kuba igcwele izakuliphelisa unxano.</p> <p><b>Cela abafundi ukuba bajonge inyathelo elilandelayo</b> Sebenzisa i 500ml yebhotile engenanto uze ugalele amanzi akwi 1L yebhotile kwi 500ml</p> <p><b>Buza umbuzo eklasini</b></p> <p><b>Uqaphela ntoni?</b> Amanzi akwibhotile ye 1L ayafana nala akwi 500ml <b>umehluko</b> kukuba amanzi ebekwikhongozeli ezingalinganiyo.</p> <p><b>Umsebenzi weklasi yonke:</b> beka iglasi yamanzi kunye nesikhongozeli se 2L ngokukhethekileyo evuleke kakhulu ufake icephe. Icephe kunye nekomityi etafileni.</p> <p>Buza abafundi ukuba yeyiphi kwezizinto, amacephe kunye neekomityi ezizakugcwalisa ibhotile ye 2L msinya (ikomityi) uze ucele umfundi abemnye eze ngaphambili agalele eglasini esebenzisa icephe ize ibesehafini yokugcwala.</p> <p>Bacele babale inani lamacephe eliwathathayo ukugcwalisa iglasi ehafini. (impendulo izakuxhomekeka kubungakanani beglasi)</p> <p><b>Yenza abafundi</b> babengamaqela amathathu ukwenzela <b>umsebenzi wobahloli basekhithshini</b></p> <p>Iqela A -100ml amanzi      Iqela B – 200ml ijusi      Iqela C- 300ml ubisi</p> <p><b>Nika iqela ngalinye</b> ukuba lilinganisele izixa ezilindelekileyo besebenzisa itisipuni 5ml amacephe 10ml kunye nee komityi ngokulandelelana.</p>	

**Cela abafundi** ukuba babale zingaphi izinto zokulinganisa abazisebenzisileyo ukugcwalisa isixa esi esilindelekileyo. **Iimpendulo kufuneka zingqamelane no Msebenzi 1 kwiimpendulo NB;** abafundi kufuneka baqaphele ukuba amatisipuni kukubala ngezi 5s kwaye icephe ngama 10s.

**Cacisela abafundi** ukuba bebelinganisela ngokuqikelela, amacephe kunye neekomityi ezingezo litha kunye nee mililitha (umlinganiselo ongekho semgangathweni)

**Yazisa ngamagama iLitha kunye ne ml** ngokuthi ucele abafundi ukuba bakinike ubungakanani beedrinki ezihwahlwazayo, amarhewu, ubisi, ubungakanani bebhottle zamayeza, amacephe xa kubhakwa, umlinganiselo weyeza, ibhottle yejusi yesikolo, amapheyile amanzi njl njl

**Sebenzisa I 1L kunye ne 500 ml ezidlulileyo kulomzekeliso**  
 Injongo kukuthelekisa iilitha kunye neemililitha. Beka iibhottle ezimbini ngoku I 1 litha egcweleyo kunye ne 500ml egcweleyo  
 Ngelishesha cela abafundi ukuba bathelekise ezizikhongozeli zimbini **500ml mncinci kune 1 litha okanye 1 litha mkhulu kuno 500ml**  
**Abafundi kufuneka bayazi ukuba u Mililitha ngamafutshane ngu ml, kwaye ilitha ngu L**

**Ngoko buza abafundi** ukuba zingaphi i 500ml ezingonela kwi 1L yebhottle. **(2)**  
**Ukuba abafundi abaniki mpendulo chitha I 1L yebhottle uze ugcwalise nge 500ml ngoko abafundi bazakuqonda ukuba zi 2**  
**Bonisa ukuba 500ml + 500ml = 1000ml = 1Litha**  
**Gxininisa kubafundi** ukuba sithlekisa 2 okanye ngaphezulu ubungakanani ngokuthi sijonge ukuba zingaphi kwezincinci ezingena kwenkulu enye.  
 Abafundi mabagqibezele umsebenzi wokuhlela eyedwa

- Iqela A**            lalinganisela amanzi ali-100 ml eetisipuni
- Iqela B**            lalinganisela ijusi engama – 200 ml ngamacephe
- Iqela C**            langinisela ubisi olungama – 300 ngeekomityi

**Umsebenzi 1** Iphapha 158–159

1. 1B            2. Iqela C            3. 50ml            4. B
- kuthelekisa ubungakanani

**Umsebenzi 2**

1. 30L, 10L, 3L, 300ml, 100ml, 10ml
- Umsebenzi Iphapha 161

1. f; d; a; b; e; c
2. Ipendulo yomfundi

**Ungenelelo**

Kubafundi abasokolayo chitha ixesha kwinto ebambekayo. Nika imilinganiselo eyahlukeneyo kwaye ubacele bagcwalise okanye bakhuphele kwizikhongozeli ezincinci okanye ezinkulu ukubona ukuba yintoni encinci onaye enkulu.

**Umsebenzi owongezelelweyo:**

- Nika abafundi imisebenzi yokuba zingaphi ii ml ezikhoyo kubungakanani obulinganisekayo njenge
1. zingaphi ii 500ml kwi 2l
  2. ukuba isikhongozeli siyi 5L ndize ndigalele i 6 x 500ml yamanzi. Zingaphi ngaphezulu ezifunekayo ukugcwalisa. impendulo (6x500ml is 3L) ngoko 5L – 3L = 2L = 4, 500ml iibhottle.

# Ixesha: iintsuku zeveki, iinyanga zonyaka

## Injongo yokufunda

- Xela ixesha leeyure ezili 12- ngeeyure, iihafu zeeyure kunye neekota zeeyure
- Sebenzisa iiwotshi ukubala ubude bexesha ngeeyure kunye neehafu zeeyure
- Chaza kwaye ulandelelanise iintsuku zeveki kunye neenyanga zonyaka

### Intshayelelo

#### Ukuxela ixesha

Buza abafundi ukuba bavuka ngabani ixesha, batya ngalo isidlo sakusasa, abaya ngalo esikolweni, abalala ngalo? Abafundi abathathu abakhethiweyo cmabeze bazokubhala ebhodini ixesha abenza ngalo nayiphi na into kwezi zingentla kwaye **bazobe newotshi ukubonisa ixesha**

Ukuqonda iintsuku, iiveki, kunye neenyanga.  
Cela abafundi bachaze iinyanga zonyaka, iintsuku zeveki.

Khokela abafundi ekuculeni ingoma eqhelekileyo  
*Iintsuku ezingamashumi mathathu ziku eyoMsintsi, Tshazimpunzi, Silimela kunye neyeNkanga.*  
*Zonke ezinye zinamashumi mathatu ananye,*  
*Ngaphandle kweYomdumba kuphela, yena uneentsuku ezingamashumi amabini anesibhozo*  
*Kunye namashumi amabini anethoba kunyaka owehlukileyo.*

#### Izixhobo

Ikhalenda, iwotshi yedijithali kunye ne analogi, ipleyiti zamaphepha zokwenza iwotshi

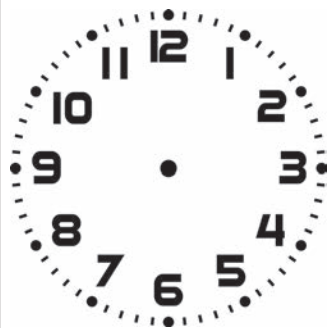
#### Amagama amatsha

Isiqingatha, iiyure; kota-emva, kota-phambi

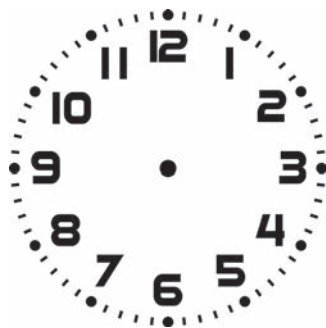
### Indlela yokufundisa

#### Ukuxela ixesha

a.



b.



#### Qhubekeka kumzekelo wamaxesha anikezwe ngabafundi

Jonga iiwotshi abafundi abazizobayo kwaye ubenengxoxo neklasi

1. Ingaba iiwotshi zizotywe ngendlela echanekileyo? **Khumbula ukuba** isandla semizuzu side kunesandla seeyure. Isandla semizuzu kunye nesandla seeyure zidibene kumbindi wemaki ka 9 kunye no 3
2. **Cacisela abafundi** malunga nentsingiselo ka **EMVA** exesheni. (**ikota emva kwentsimbi ye 7 isandla seyure sidlula ngapha kwe 7 ixesha lisemva kwe 7.**)

**Zoba iwotshi** uze ubonise abafundi ukuba ixesha lisuka njani kwi **12 yeeyure kunye no 0 yemizuzu**

**Iiyure zisoloko zibizwa ngamanani esiwabonayo ewotshini, kodwa imizuzu ifunyanwa ngokubala ngezi 5s njengakumboniso ongezantsi.**

**Umzekelo**

**Khokela abafundi ekufumaniseni:**

**Ngentsimbi, ikota emva, icala emva, ngokwahlula imilo njengale iboniswe ngentla.**

**Buza abafundi ukuba isangqa sahlulwe njani (ehafini) ethetha ukuba i 12 simele intsimbi kwaye isi 6 simele icala**

**Ngoba abafundi kumele bazi ukuba isangqa sahlulwe ngokwee kota, inani isi 3 ewotshini sikwi kota yiyo lonto iyikota emva**

**Cacisa ukuba nge 9 ixesha lizokuhambela kwiyure elandelayo, kwaye sithi yi kota phambi....**

**Abafundi bazodibana bagqibezele umsebenzi wokuzoba eyabo iwotshi.**

**Ukuqonda iintsuku zeveki kunye neenyanga**

**Ingxoxo yeklasi yonke:** Beka ikhalenda ebonisa iinyanga iiveki neentsuku.

**Cela abafundi ukuba babale inani leenyanga ekhalendeni. 12**

babale inani leeveki enyangeni. 4

babale inani leentsuku evekini. 7

**khetha umfundi ngokungahlelwanga ukuba eza azokubala inani leentsuku zesikolo kwikota yokuqala.**

**Nika usuku lokuvula kunye nelokuvala.**

**Cela abafundi ukuba babale inani leenyanga ezigcweleyo kwi kota, inani leeveki.**

**Imidlalo yewotshi:**

**Iphepha 164**

**Impendulo kwimifanekiso yeewotshi kwincwadi yabafundi**

1. A. 9 ngentsimbi      B. icala emva 7      C. ikota phambi 10      D. icala emva 8
2. 30 imizuzu. (hambisa isandla semizuzu siye phambili ukusuka kwi 6 (icala) ude ufike kwi 12 ubala ngezi 5s.

**Ukuqonda iintsuku zeveki**

<b>Intsuku zeveki zisi – 7</b>	Mvulo Lweisibini Lwesithathu Lwesine Lwesihlanu Mgqibelo Cawe	
<b>Iinyanga zonyaka zi-12</b>	<b>eyoMqungu</b>	<b>Umsebenzi</b> <span style="float: right;"><b>Iphepha 167</b></span>
	<b>eyoMdumba</b>	1a. 7      b. 3      c. 6
	<b>eyoKwindla</b>	d. 14 liveki 7 intsuku 2 iiveki zintsuku ezi-14      e. 2 (24 = 12 +12 )
	<b>uTshazimpunzi</b>	
	<b>uCanzibe</b>	
	<b>eyeSilimela</b>	
	<b>eyeKhala</b>	
	<b>eyeThupha</b>	
	<b>eyoMsintsi</b>	
	<b>eyeDwarha</b>	
	<b>eyeNkanga</b>	
	<b>eyoMnga</b>	

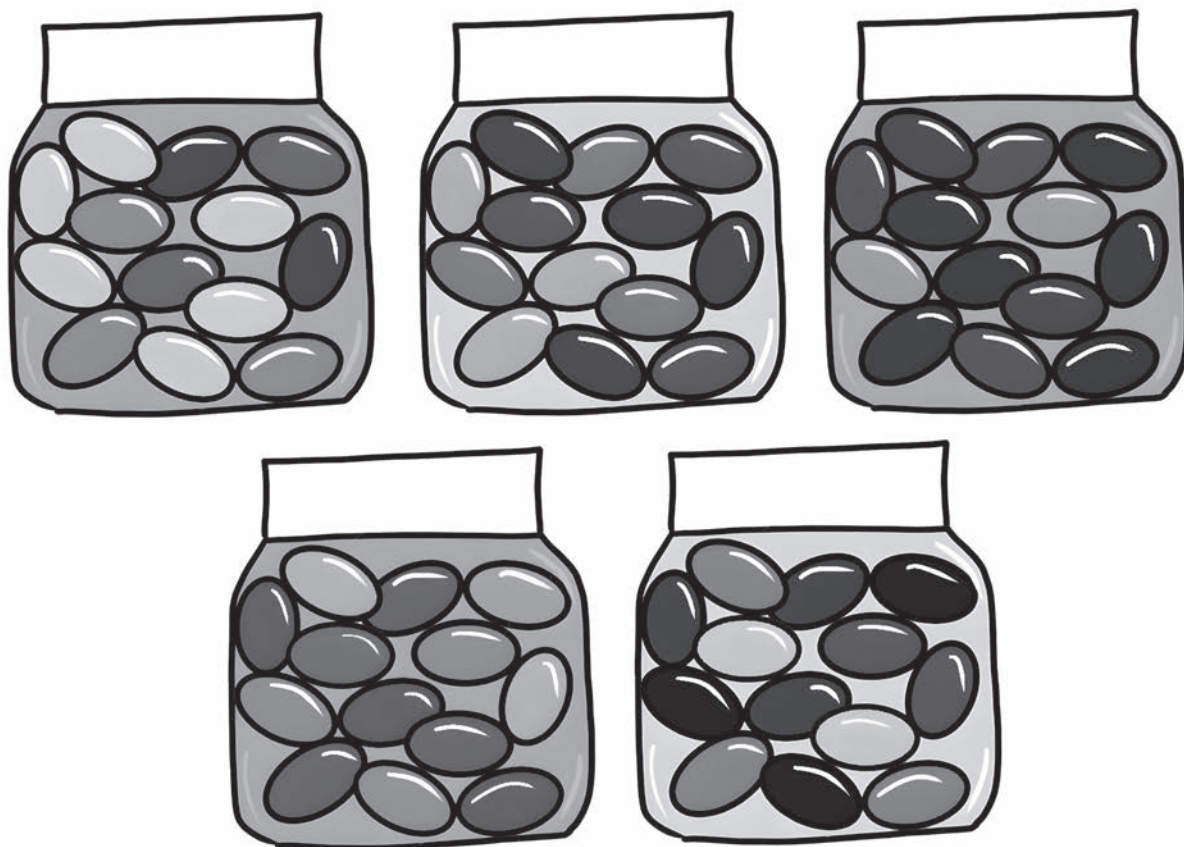
**Ungenelelo**

Nika abafundi imisebenzi ejongana nentsimbi okanye ikota emva kuphela.

**Umsebenzi owongezelelweyo:** abafundi bangasebenza kwimisebenzi kuqula ukuthabatha kunye nokudibanisa ixesha.

Umzekelo: uThabo uvuke 30 imizuzu emva kwexesha ngo Lwesihlanu waze washiywa yibhasi. I alamu yakhe yeveki ikhala ngentsimbi ye 6 rhoqo kusasa. Ukhwela ibhasi yesikolo ngentsimbi yesi 7 yonke imihla. Utata wakhe uyokumbeka, kodwa ebesele eshiywe lixesha:

1. uvuke ngabani ixesha uThabo? Icala emva kwentsimbi ye 6
2. ufike ngabani ixesha esikolweni ukuba ufike abanye bena 30 yemizuzu beqalile izifundo ngekota phambi kwentsimbi ye 9. Kota emva kwentsimbi ye 8



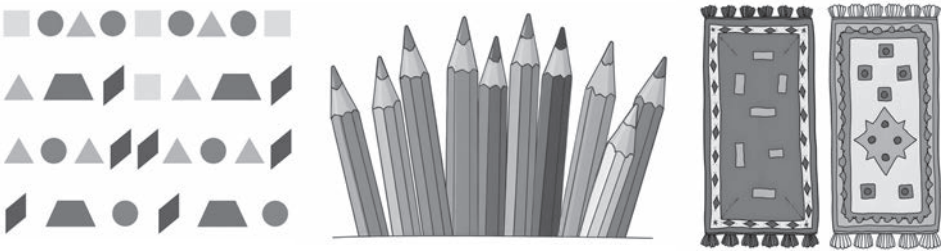

# IiPateni zeJiyometri

## Injongo yokufunda – Iipateni zejiyometri

- Kuphela, yandisa, chaza iipateni ezilula ezenziwe ngezinto, imizobo yemigca, neemilo
- Yaka kwaye uchaze ezakho iipateni

### Iipateni zamanani:

- Khuphela, yandisa, kwaye uchaze ukuya kwi (iziphinfaphindo ze 10, 5, 2, 3, 4)
- Yakha ezakho iipateni zamanani

Intshayelelo	
<p>Cela abafundi bajonge kwindawo ebangqongileyo baze bachonge naziphi na iipateni (ukuhlengahlengiswa kwezitena edongeni okanye nayiphi na ipatheni ekwindawo abakuyo)</p> <p>Umzekelo</p> <p>Ixesha lonyaka ihlobo, ekwindla, ebusika, intwasahlobo yipateni apho ixesha lifika khona</p>	
Izinto/izixhobo	Amagama amatsha
<p>Sika iimilo ze 2D</p> <p>Ikhuni le ayisi khrim</p> <p>Umgca manani</p>	<p>iimilo ze 2D</p>
Indlela yokufundisa	
<p><b>Qala</b> ngokunika ingcaciso <b>ngepateni</b> kubafundi ukuhlelwa kwamanani, iimilo, imibala, imifanekiso (nezinye) naphindwa ngendlela ethile.</p> <p><b>Nika imizekelo</b> ukubonisa ukuba iipateni zingasebenzisa ngaphezulu kwento enye, njengeemilo kunye namanani zombini.</p>	
	
<p><b>Iipateni zamanani:</b> 2, 4, 6, 8, 10, 12, 14</p> <p>Cacisa ukuba isifundo sizakujonga <b>iipateni</b> zamanani (iipateni usebenzisa amanani)</p> <p>Kunye <b>neepateni zejiyometri</b> (iipateni usebenzisa iimilo)</p> <p>Xoxa ngeempendulo zabafundi</p> <p><b>Kukhokele utitshale</b> kwipateni yolwimi lwezandla.</p> <p>Buza abafundi ukuba babona ntoni konoobumba bokuqala abathathu </p> <p>(songa kuqala umnwe o 1, songa iminwe emi 3, songa iminwe emithathu phantsi.)</p> <p>Cacisela abafundi ngepateni yolwimi lwesandla olungabonwa(khatha iimpawu zepateni ezilandelelanayo)</p> <p>NB : abafundi kufuneka bayazi ukubat xa besenza iipateni, kufuneka bagqibe kumthetho, njengalo 'dibanisa 2' okanye utshintshe iimilo.</p> <p><b>Umsebenzi wamaqela</b> : beka abafundi ngokwamaqela ama uze ubacele benze ezabo iipateni zejiyometri besebenzisa izikwere, kunye noonxantathu. (abafundi kufuneka bachaze umthetho wabo).</p> <p><b>Emva</b> kweepatheni, yazisa ngeepatheni zamanani.</p>	

**Nika lo mzekelo ulandelayo.**

**2, 4, 6, 8, 10** . . .xelela abafundi ukuba ukubala ngezi 2 kwenza ipateni yenani apho inani elilandelayo lifumaneka ngokudibanisa isi 2 kwinani elidlulileyo.

Cela abafundi ukuba babale nge 3, 4s, 5, kunye ne 10 kwaye ujonge ipateni (de ufike kumanani ama 5)

1. 3; 6; 9; 12; 15 umthetho dibanisa isi 3
2. 4; 8; 12; 16; 20 umthetho dibanisa isi 4
3. 5; 10; 15; 20; 25 umthetho dibanisa isi 5
4. 10; 20; 30; 40; 50 umthetho dibanisa i 10

**Qukumbela** fkubafundi ngokuthi ukubala ubheka phambili/ubuya umva nakweliphi inani kunika ipateni ngomthetho othi dibanisa/thabatha elonani.

**Nika umzekelo** ukubala ubuya umva

20; 15; 10; 5; 0

Abafundi bagqibezele umsebenzi ezincwadini zabo zokusebenzela.

5. 9 umthetho ngu dibanisa 2
6. abafundi bazakwenza iipatheni ezahlukeneyo. Jonga umthetho wokumakisha

**Umsebenzi****Iphepha 168**

Zoba ipateni ulandele imifanekiso ebonakala kumsebenzi.

1. Sisangqa
2. Ewe
3. Yidayimani
4. Sikwere
5. Impendulo yomfundi

**Ungenelelo**

Yenza iqela labafundi abafumana ubunzima kwaye usebeznise imilo e 1 kwipatheni kunye nokutshintsha umbala

Ngeepatheni zamanani banike umgca manani ukuze babale ngokwamaqela ezi 2, 3 kunye nesi 5

**Umsebenzi owandisiweyo:** ngezibini kunye nomsebenzi wamaqela agqibe umsebenzi ngexesha yongeza iipatheni ukuya ekubaleni nge 7s, 8s, 9s, zombini ukubauya umva kunye nokubheka phambili.

# limilo, ndawo-bume nembonakalo

## linjongo zokufunda


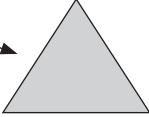
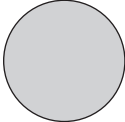

- Umilo lwendawo: ngaphambili kwe, ngasemva, ekhohlo, ekunene, phezulu, phantsi, ecaleni kwe, ngaphezulu kwe.
- Indawo kunye nesalathiso- landela izalathiso, hamba hamba eklasini.
- Qaphela, xela, chaza, hlela uze uthelekise iimilo ze 2D – uluhlu lweemilo iimpawu zeemilo.

### Intshayelo kunye/okanye umzekelo

**Cela abafundi** tukuba bajonge eklasini kwaye bachaze nayiphi na into enemilo ye 2D okanye ye 3D ngaphakathi eklasini, bangachaza nezinye izinto ezisekhayeni okanye esikolweni.

Iidesika, iincwadi, iifestile(iirekhthengile) **iipatheni zebagla ,iifestile zomoya (zingoo nxantathu kunye nezikwere.) ikhabhathi katitshala, amacango njl njl. Ikomityi katitshala ( isiseko sesangqa)**

Zoba ezimililo zilandelayo kwaye abafundi batshatise igama nemilo

<b>Nxantathu</b>	
<b>Sangqa</b>	
<b>Rekhthengile</b>	
<b>Skwere</b>	

### Ukuxela indawo

Buza abafundi ngendawo yezinto ezahlukileyo eklasini

Iphi imfumba yeencwadi? (etafileni)

Ziphi inyawo zakho? (ngaphantsi kwetafile)

Uphi umntu ohleli ecaleni kwakho (ngasekunene, ngemva, ngaphambili okanye ngasekhohlo)

### Amagama amatsha:

limilo

### Amagama amatsha

Incam  
ubuso  
umphetho

### Isikhokelo/indlela/iqhinga

Cela abafundi ukuba bachaze amagama ezinto nokuba zeziphi ezingu 3D eklasini (kumele bakwazi ukuchaza naziphi na ezinye ngaphandle kweemilo ezinokwakheka kuka 2D.

Hlalisa abafundi ngezibini uze ubavumele baxoxe ukuba kutheni ezinye izinto zikwimilo ye 3D kwaye ezinye zikwi 2D. (izinto ze 3D zingabonwa kwindawo ezahlukeneyo)

Umsebenzi waseklasini: Abuza abafundi ukuba yintoni ubudlelwane phakathi kweemilo ze 2D kunye nezinto ze 3D. (ubuso bezinto ze 3D benziwe ngeemilo ze 2D)

Bonisa nokuba yeyiphi into ye 3D kubafundi (ngaphandle kwesilinda kunye nengqukuva) ingayityhubhu, unxantathu/ iprism yerekhthengile, iiphiramidi

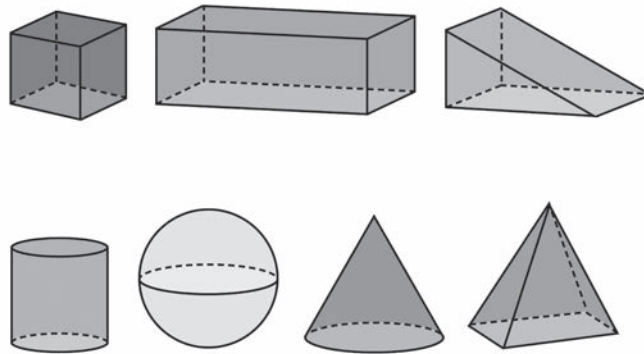
Kukhokele utitshala: buza abafundi ukuba zeziphi iimilo abazibonayo zingqonge izinto ze 3D ( iimilo ze 2D ezidityaniswe kunye.

Cacisa ukuba iimilo ze 2D bubuso kwaye kulapho zidibana khoba (umphetho)

NB: jonga kumphetho wedesika, ibhokisi ukuze abafundi bakhumbule

Bonisa abafundi apho ubuso obu 2 okanye ngaphezulu budibana khona (ikona ebukhali yincam)

### Sebenzisa lomzekelo.



Yahlula abafundi ngokwamaqela ukwenzela ukuzingela imilo ngaphakathi nagaphandle kweklasi

Cela abafundi ukuba babhale phantsi zonke izinto abazichongileyo njenge 2d kunye ne 3D kwaye babhale amagama emilo

Abafundi mabazobe kwaye babhale amagama emilo ngezibini

Hlanganani kwakhona nize nabelane ngenikufumanisileyo

Okokugqibela: abafundi mabagqibezele umsebenzi weklasi

### Ukuxela indawo

Umsebenzi weklasi yonke.

Khetha abafundi babe ba- 5 ngokungahlelwanga kwaye ubeke abemnye esiphakathini, omnye phambili, omnye ngasemva, omnye ngasekhohlo aze omnye abengase kunene.

Cela abafundi bachaze indawo yabanye abafundi abane malunga nalomfundi usesiphakathini ( abafundi bangaphendula bathi ecaleni kwe, ngasekunene, ecaleni, ngaphambili, ngasemva)

Xelela abafundi indawo inganxulumaniswa nezolathandawo ngolwimi lwesingesi njengokuba isixelela ukuba into indawoni xa kuthelakiswa nezinye izinto.

Thumela abafundi kumvundla kwaye baxoxe ngeendawo( Umsebenzi 1a)

Misa abafundi ngomgca kwaye uxelele iklasi ukuba umfundi wokuqala kuqala uze ubacele baqhubekeke nomfundi wesi 2 ...



**Ungenelelo/umsebenzi owandisiweyo**

**Ukuziqhelanisa nokuzimela:** labafundi abafumana ubunzima ukuqonda iimilo zze 2d mabanikwe izinto eziphathekayo kwaye batshatise amagama. Mababe nencwadi yamagama e 2D.

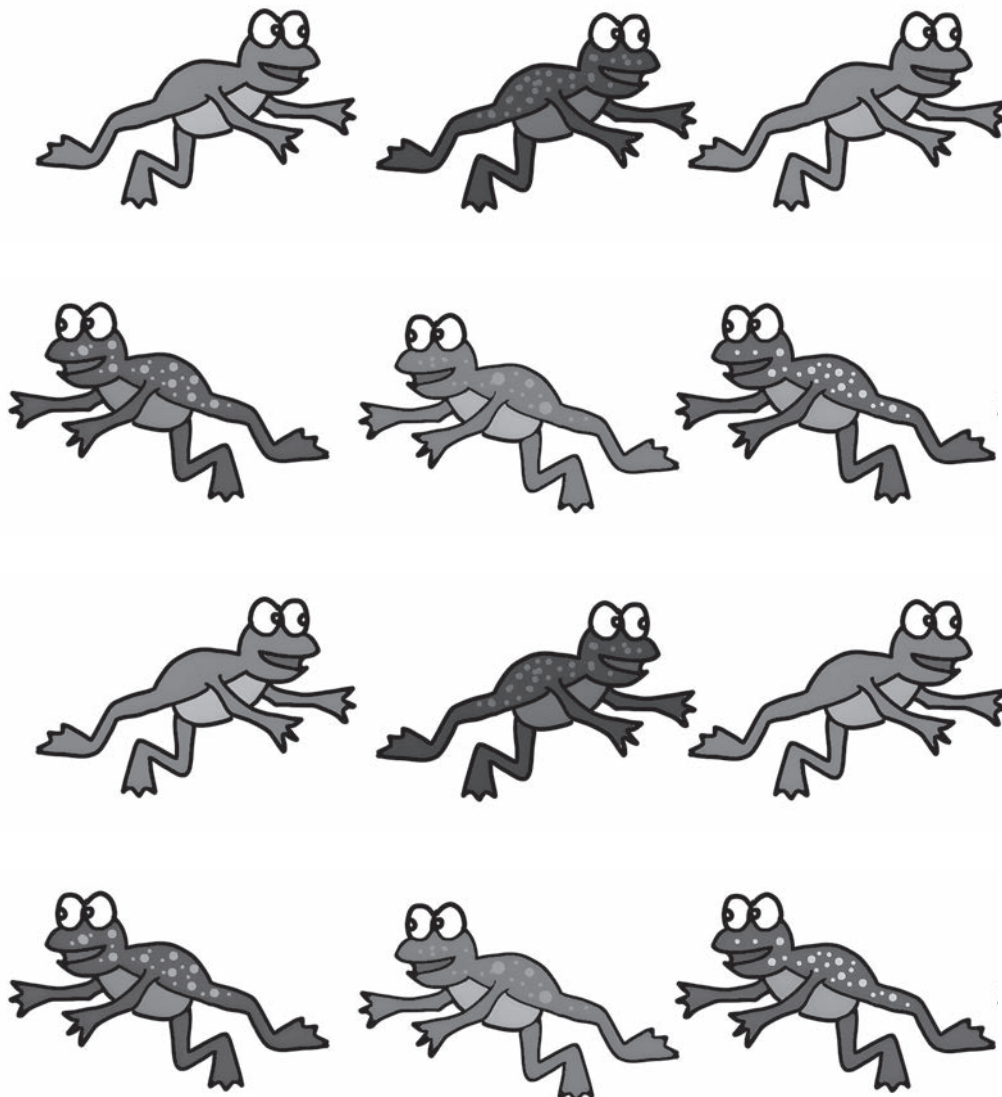
Ngokuxela indawo sebenzisa umgca manani nabafundi kwaye nichonge inani eliphambi, emva, ngaphambi kwenani. Buza abafundi ukuba leliphi inani elisekuqaleni, kuthathu, kuhlanu, njl njl etc.

**Abafundi abakwinqanaba eliphezulu:** bacele bafumane umahluko phakathi kobuso be phiramidi kunye neepirisim. Banike iprisim eyirekthengile kunye ne phiramidi eyirekthengile.

Ukuxela indawo abafundi banganikwa imisebenzi ezindlela ezininzi. Sebenzisa iitshati eziyi 100 ukubuza abafundi imibuzo okanye igridi enezinto ezahlukeneyo ezibekiweyo umz

Leliphi inani le 10th ukusuka kuma 78?

Umfumana njnai u 80 ku 95 ? qala ku 95 ubale ubuya umva ukuya ku 90



# Ukuphathwa kwedatha

## Injongo yokufunda

- Qokelela kwaye uhlele idatha
- Thelekisa kwaye uhlele imilinganiselo eyahlukeneyo
- Yenza idatha kwi piktografu
- Qokelela kwaye uhlele idatha
- Bonisa idatha ehleliweyo
- Hlalutya kwaye utolike idatha

Intshayelelo kunye/okanye umzekelo						
<p><b>Cacisa</b> kuthetha ukuthini ukuqokelela idatha is meant by data collection (ukuhlanganiswa kwe datha)                      Buza abafundi kutheni idatha iqokelelwa. (ukuthatha izigqibo, ukuqonda ulwazi)</p> <p><b>Nika imizekelo</b> yokuba idatha ingamelwa njani (iitshati zephayi, iitafile zetally, iipiktografu, iibha grafu)</p>						
Izinto/izixhobo	Amagama amatsha:					
I	Talli Datha					
Isikhokelo/Indlela/iqhingqa						
<p>Ibali – yenza ibali ngabafundi eParkini yaseKhosa.</p> <p>Utitshala makacele abafundi ukuba baqakumbele idatha ngawabo amagama.</p> <p><b>Cacisela</b> abafundi ukuba iimaki zetally kukubala ngesi 5s xa unenani elinqumlezileyo. (xa sibala idatha, sisebenzisa iimaki ze talli IIII (zimele isi 5)</p> <p><b>Yibanengxoxo eklasini</b> ngokubusa imibuzo ekhokelayo njengale, nesetyenziswe kancinci</p> <p><b>Buza</b> abafundi indlela eyahlukileyo yokumelwa kwedatha esetyenziswe kumzekelo we Parkini</p> <p><b>Buza</b> abafundi bathelekise iimaki zetally kunye nobude be bha (ifrikhwensi)</p> <p>Abafundi bamele ukwazi ukuba iimaki ze tally zilingana nobude be bha</p> <p><b>Umsebenzi weklasi yonke</b>                      Sebenzisa umzekelo owenziweyo (uphando lombala othandwayo) ukucacisa itally njengenani wezehlo zomzekelo wombala (zingaphi)</p> <p>Bonisa ukuba ibha grafu izotywa njani kwidatha enikeziweyo (siqokelele ulwazi malunga nemibala bhelu, bhlu, hlaza, bomvu, pinki, kunye nomfusa)</p> <p>Qinisekisa ukuba abafundi baqonda ukuba <b>umbala</b> ngamnye kufuneka uhambelane nenani/itali</p> <p>Gxininisa (ukhetha phakathi kwento ema ngokuthe nkqo/nethe tye kwi bha grafu</p> <p>kwaye uchaze ngokucacileyo iinketho ezahlukeneyo zophando.</p>						
<b>Umzekelo womsebenzi wemibala</b>						
<b>Imibala ethandwayo</b>						
5						
4						
3						
2						
1						
	<b>Bhelu</b>	<b>Bhlu</b>	<b>hlaza</b>	<b>Bomvu</b>	<b>Pinki</b>	<b>Mfusa</b>

**Kulo mzekelo ungentla buza abafundi**

Ngowuphi owona mbala owathandwa kakhulu? (bhelu)  
Yeyiphi eyona mibala eyathandwa kancinci? (pinku kunye no mfusa)

**Umsebenzi wezibini**

Abafundi mababhale iisimboli zamanani kunye namagama amanani ukubala iintaka ngosuku ngalunye

Inkcazo yeqela

Nika abafundi iikhrayonsi ngokomfanekiso ngamnye okanye usebenzise umfanekiso owunikiweyo kwincwadi yombhalo

Inyathelo 1- abafundi mabahlele iikhrayonsi baze benze itshati ye tally .

Umbala wekhrayoni	iTally
Bomvu	###
Bhlu	III
Bhelu	II
Hlaza	IIII

**Iimpendulo kwimisebenzi yeencwadi zezifundo/imisebenzi**

Iphepha 176

1. Inja
2. 24
3. 82
4. 21
5.  $12 - 3 = 9$
6.  $24 - 8 = 16$

**Ungenelelo**

Ukuziqhelanisa nokuzimela, uhlolo oluyakwenziwa, ziqhelanise ngezibini kunye nomsebenzi weqela

**Ukuziqhelanisa nokuzimela:** Nika abafundi abafumana ubunzi iimisebenzi yokuhlela njengokuhlela izinto zokubala ngemibala/ukuhlela iimilo ze 2D okanye izilwanyana. Kufuneka babhale inani lazo inye, inani kuqala baze nge tally

Abafundi abaphambili: Cela abafundi bazobe iipiktografu yomsebenzi wemibala yeekhrayonsi.

# Veza izakhono zakho

1. Bhala amanani afihliweyo.

(4)

	132								
								149	
						157			
				165					
									180

a.

b.

c.

d.

2. Bhala inani ngamagama.

69; 75

(1)

3. Bhala xa lingaphezulu kune-10 naxa lingaphantsi kune-10:

56; 65

(1)

4. Bhala elingaphambi nelingasemva:

69; 73

(1)

5. Bhala la manani ngamashumi nemivo:

78; 46

(1)

6. Bhala ixabiso lenani elibhalwe bomvu.

a. 58

b. 77

(2)

7. Bhala iimpendulo. Ungasebenzisa ukudibanisa amanani kuze kuphume elithile ukuze kukuncede.

a.  $42 + 31 = \underline{\hspace{2cm}}$

b.  $55 + 14 = \underline{\hspace{2cm}}$

c.  $69 - 23 = \underline{\hspace{2cm}}$

d.  $74 - 33 = \underline{\hspace{2cm}}$

(4)

8. Bhala iimpendulo.

a. amaqela ama-5 ana-2 =  $\underline{\hspace{2cm}}$

b. amaqela ali-10 ana-3 =  $\underline{\hspace{2cm}}$

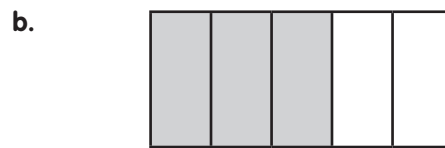
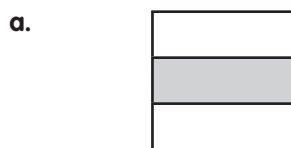
c. ihafu ka-40 =  $\underline{\hspace{2cm}}$

d. phindaphinda u-15 =  $\underline{\hspace{2cm}}$

(2)

(2)

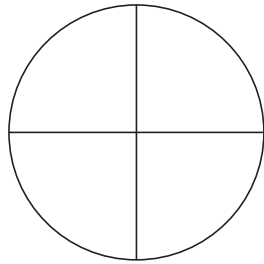
9. Bhala iqhezu yenxalenye enombala.



(2)

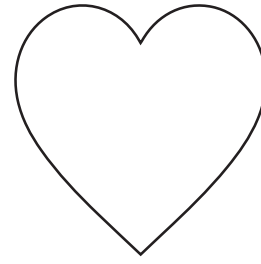
10. Khuphela le milo uze ufake umbala ukuze uhambelane neqhezu. (2)

a.



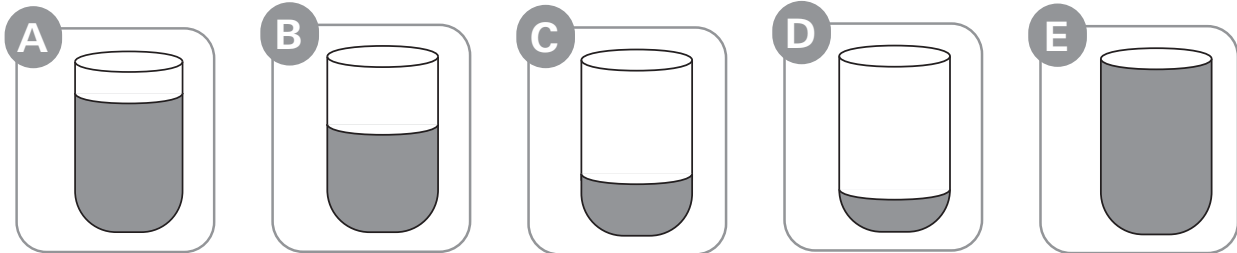
iikota eziyi-3

b.



ihafu eyi-1

11. Utata uqale ukufunda incwadi yamabali nge-5 eyoMsintsi. Ufunde amaphepha ambalwa qho ebusuku waza wayigqiba ukuyifunda incwadi nge-12 eyoMsintsi. Kumthathe ixesha elingakanani ukugqiba le ncwadi? (1)



12. Bhala A, B, C, D okanye E njengependulo yakho.

a. Zeziphi iikhonteyina ezinejusi eninzi kuno **B**? (1)

b. Yeyiphi ikhonteyina enejesi eninzi kuno-**D** kodwa encinci kuno-**B**? (1)

13. a. Zoba ezi khonteyina zilandelelane ukusuka kweyona ithwele kakhulu ukuya kweyona ithwele kancinci. (1)



b. Zoba ukuba yeyiphi obunokuyisebenzisa ukuze ugqwalise ezi khonteyina zingasentla ngokukhawuleza kangangoko kunokwenzeka? (1)

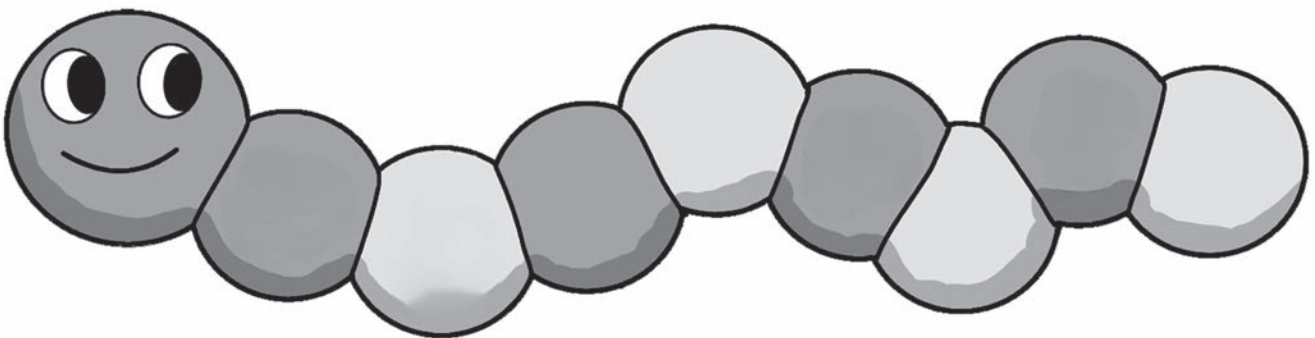


### Ikota 3

14. UNick noKaty benze yomfanekiso yezinto ezithandwa ngabafundi abakwiiklasi zabo besenzela imini ekuthengiswa ngayo. Nantsi abayifumanisileyo.
- abafundi abali-10 izitoklekeke
  - aba-7 bathanda ikendi
  - aba-8 bathanda ibhani
  - abayi-3 bathanda ilikharasi
  - abayi-9 bathanda ifaji
- a. Yenza igrafu yomfanekiso ukuze ubonise ukuba bezinjani iigrafu zabo. (1)
- b. Yenze ibe nesihloko. Sebenzisa umbala owahlukileyo ukubonisa into nganye emnandi ekhethiweyo. (1)
15. Phendula le mibuzo.
- a. Yeyiphi into emnandi eyiyona ithandwayo? (1)
- b. Bangaphi abangakumbi abathande ifaji? (1)
- c. Bangaphi abafundi ababeyinxalenye yale mibuzo? Bhala isibalo. (1)

1	12	23	34	45
2	13	24	35	46
3	14	25	36	47
4	15	26	37	48
5	16	27	38	49
6	17	28	39	50
7	18	29	40	51
8	19	30	41	52
9	20	31	42	53
10	21	32	43	54
11	22	33	44	55

**Amanqaku: 33**



Intsh kunye/okanye umzekelo

Izinto/izixhobo

limpendulo kwimisebenzi yeencwadi zezifundo –

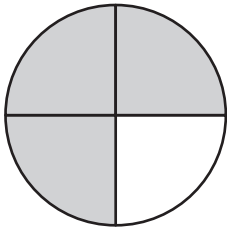
Uhlobo lohambo lokufunda

1.

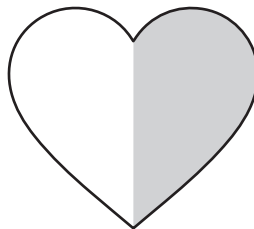
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180

- 142; 144; 146; 148
  - 151; 161; 171
  - 140; 150; 160; 180
  - 155; 166; 177
- amashumi mathandathu anethoba; amashumi asixhenxe anesihlunu
  - 10 ngaphezulu- 66, 75      10 ngaphantsi- 46; 55
  - 68 uza phambili kwaye 70 uza emva  
72 uza phambi kwa 73 kwaye 74 uza emva
  - $78 = 7$  amashumi kunye ne 8 imivo       $46 = 4$  amashumi kunye ne 6 imivo
  - a. 8                      b. 70
  - a. 53                    b. 69                    c. 46                    d. 41
  - a. 10                    b. 30                    c. 20                    d. 30
  - a.  $1/3$                     b.  $3/5$

10. a.



b.

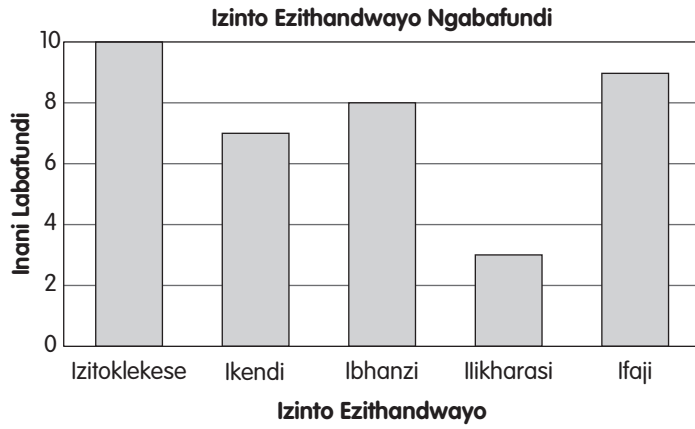
11. Iiyure ezisi-7 ( $12 - 5 = 7$ )

12. a. A, D, E      b. C

13. a. Ibhodle enkulu (emhlophe), Ikomityi enkulu, Ikhaphu.

b. Ijug – kuba ibamba amanzi amaninzi kwaye kulula ukuyisebenzisa ngokukhawuleza.

14. a. Le grafu ibonisa izinto ezithandwa ngabafundi kwiklasi.



**Iilekese ezithandwayo ngosuku lwemarike**

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					
	Ilolopop	Iswiti	Igami bhez	likhwarayisi	ifaji

**Iilekese ezithandwayo**

Isihloko: Izinto ezithandwayo ngabafundi kwiklasi

b. Umbala ohlukileyo kufuneka usetyenziswe kwizitoklekese kuba zifunwa kakhulu (10 abafundi).

15. a. Izitoklekese      b. 6 abafundi      c. 37 abafundi