

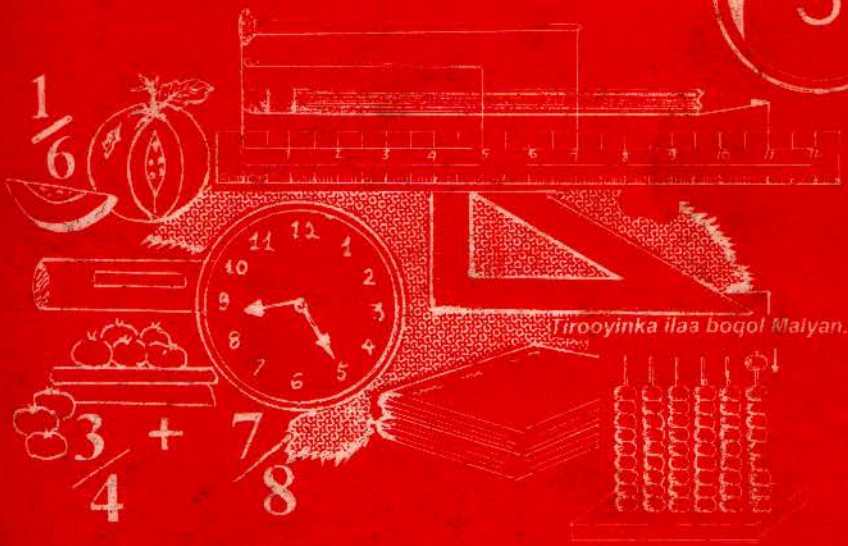


United Nations Educational, Scientific
and Cultural Organization

XISAAB

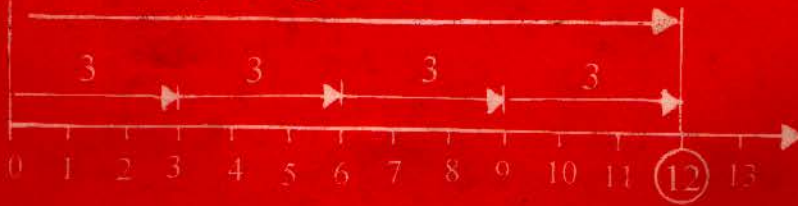
FASALKA SHANAAD

DUGSIGA DHEXE



Tirooyinka ilaa boqol Malyan.

$$4 \times 3 = x$$



XISAAB

5

XARUNTA HORUMARINTA WAXBARASHADA UNESCO-

SOOMAALIYA 1996

Preface

This textbook has been produced in order to ensure that Somali children of primary school age have access to educational materials of sound quality. Such materials are vital if the education of Somali children is to be adequately supported and if their learning is to progress in a coherent and structured manner. The publication of this Grade 5 textbook will support the continuity of Somali primary schooling, which has been disrupted by violent conflict and the destruction of educational resources. In due course, textbooks for the succeeding grades of primary schooling will be written and published. Through these efforts, Somali basic education will be strengthened and the rising generation of young Somalis will be better prepared for further study, gainful employment and constructive participation in society.

I would like to take this opportunity to thank my colleagues -- both expatriates and Somali nationals -- working in UNESCO-PEER Education Development Centres (EDCs) in Somalia for the commitment, professional skill and hard work that went into the making of this textbook.

**Mark Richmond
Head a.i.
UNESCO-PEER**

February 1, 1997

Hordhac

Buuggan waxaa loogu tala galay ardayda fasalka shanaad ee dugsiyada dhexe ee Soomaaliya. Buuggu waxa uu xiriir la leeyahay buugagta xisaabta ee fasallada dugsiyada hoose.

Buuggu waxa uu ka kooban yahay siddeed cutub oo kala ah: Tirooyin iyo Xisaabfallo, Cabbiraad, Abyooneyaal, Fududeynta jajabyada, Joomateri, Aljebra, Iskeel sawireed, Tuseyaal, Garaaf iyo celceliska xogta, iyo Ururro.

Cutub waliba waxa uu leeyahay layliyo. Baraha waxa lagula talinayaa in uu xil iska saaro sidii uu u kordhin lahaa layliyada haddii ay baahi keento, kuna dhiirrigeliyo ardayda ka shaqeynta layliyada.

Buuggan diyaarintiisa waxa keenay baahi ka jirta dugsiyada dalka. Waxa la qoray xaalad dalku ku jiro degganaansho la'aan. Waxa qoray barayaal Soomaaliyeed, waana daabacaadii ugu horeysay. Haddaba macalimiinta dhigaysa maadadan iyo qof kasta oo aqoon u leh waxaa laga rajeynayaa in ay u soo gudbiyaan wixii talo bixin ah oo ku saabsan buuggan Xarunta Horumarinta Waxbarashada UNESCO-PEER Mogadishu.

Muqdisho, 1996

Tusmo

Cutubka Koowaad: Tirooyin iyo Xisaabfallo

"Naqtiin" Tirooyinka ilaa 999,999.....	1
Tirooyinka ilaa boqol malyan.....	4
Isugeynta tirooyinka ilaa 9 god.....	7
Kala goynta tirooyinka ilaa 9 god.....	9
U duubid tiro 10ka ama 100ka ay u dhowdahay.....	11
Iskudhufasho.....	12
Iskudhufasho: Duubid tiro.....	13
Isuqaybin.....	15
Tiro Mutaxan Iyo tiro farcan.....	16
Isir Mutaxan.....	17
Dhufsane.....	19
Dhufsanayaasha ay wadaagaan.....	20
Dhufsane yaraha ay wadaagaan.....	21
Qaybshaha ugu weyn ee ay wadaagaan.....	22
Tirooyinka labajibbaaran.....	24
Hubinta u qaybsamidda 10 iyo 100.....	25
Hubinta u qaybsamidda 2, 5 iyo 3.....	26

Cutubka Labaad: Cabbiraad

Ammin

* Hab saacadeedka gh iyo gd.....	28
* Isku beddelidda saacad, daqiiqo iyo il-biriqsi.....	29
* Isugeynta halbeegyada ammintaa.....	31
* Kala goynta halbeegyada ammintaa.....	32

Dherer

* Isku beddelidda halbeegyada dhererka.....	33
* Isugeynta halbeegyada dhererka.....	35
* Kala goynta halbeegyada dhererka.....	37
* Iskudhufashada halbeegyada dhererka iyo tiro.....	39
* Isuqaybinta halbeegyada dhererka iyo tiro.....	41
* Bedka saddexagalka.....	42
* Fogaan, Xawaare iyo Ammin.....	43

Culays

* Isku beddelidda kiilogaraam iyo garaam.....	47
* Isugeynta halbeegyadaa culayska.....	50
* Kalagoynta halbeegyada culayska.....	52
* Iskudhufashada halbeegyada Culayska iyo tiro.....	54
* Isuqaybinta halbeegyada culayska iyo tiro.....	55

Wax soo gadasho..... 57

* Faa'iido iiyo khasaaro.....	59
* Boqolkii inta faa'iido ah iyo inta khasaaro ah.....	60

Saami iyo saamigal

* Saami.....	63
* Saamiga iyo halbeegyada.....	64
* Astaamaha saamiga.....	66
* Saamigal.....	67

Cutubka saddexaad: Abyooneyaal

Waa maxay Abyoone?.....	72
Horsanaanta Abyooneyaasha.....	72
Isugeynta Abyooneyaasha.....	73
Kalagoynta Abyooneyaasha.....	76
Iskudhufashada Abyooneyaasha.....	78
Isuqaybinta Abyooneyaasha.....	79

Cutubka Afraad: Fududeynta jajabyada

Habka isujaridda (isuqaybinta).....	81
Sida jajab caadi ah loogu rogo jajab tobanle.....	84
Isugeynta jajabyada iyo tirooyinka dhafan.....	86
Kalagoynta Jajabyada iyo tirooyinka dhafan.....	89
Iskudhufashada Jajabka.....	91
Isuqaybinta Jajabyada.....	93
Isugeynta Jajab tobanle.....	94
Kalagoynta jajab tobanle ilaa 3 god ah.....	95
Boqolley.....	96
* Sida jajab loogu beddelo boqolley.....	96
* Sida jajab tobanle loogu beddelo Boqolley.....	98
* Sida boqolley loogu rogo jajab caadi ah ama jajab tobanle.....	99

Cutubka Shanaad: Joometeri

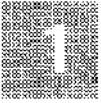
Xaglaha	
* Habka loo cabbiro xaglaha.....	100
* Noocyada xaglaha.....	104
* Xaglaha deriska ah.....	106
* Xaglaha saddexagal.....	108
Labajibbaarane	110
Laydi	111
Dhisidda shaxannada	113
* Dhisidda xagal qumman.....	113
* Dhisidda goobo.....	114
Isu'ekaasho iyo ballaarin	116
Rarid	117

Cutubka Lixaad: Aljebra

Doorsoome	119
Ururinta tibxaha isu'eg	121
Tibixaalayaasha	122
Isugeynta tibxaha isu'eg	123
Kala goynta tibxaha isu'eg	124
Qiimeynta tibxaale Aljebra	125
Dhisidda iyo furfurista isle'egyada	126
Cutubka toddobaad: Iskeel sawireed, Tuseyaal, Garaaf iyo celceliska xogta	
Iskeel sawireed	128
Ururinta, soo bandhigidda iyo diiwaangelinta xogta	131
* Habka tuseyaasha.....	133
* Habka Garaafka.....	134
* Celcelis.....	144

Cutubka siddeedaad: Ururro

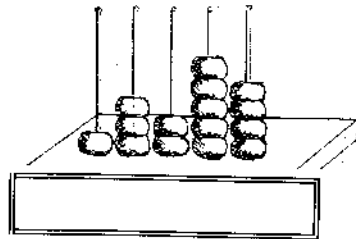
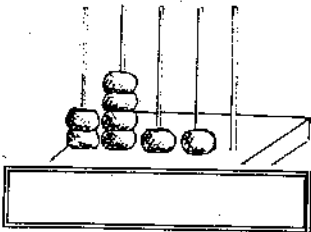
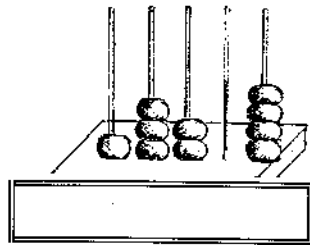
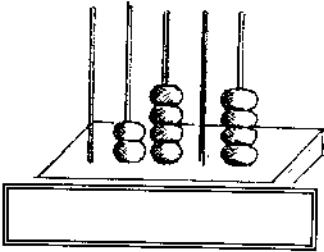
Urur	147
Kutirsanayaal	147
Siyaabaha loo qoro ururrada	148
Urur maran	150
Ururrada isle'eg	152
Ururrada isu-dhigma	153



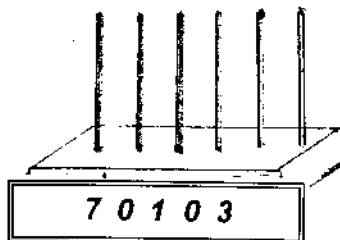
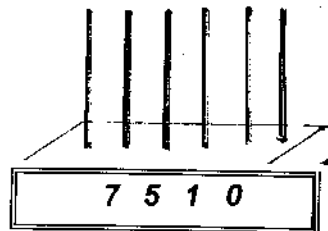
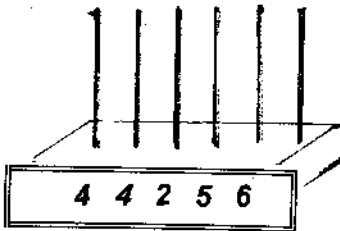
Tirooyin iyo Xisaabfallo

"Naqtiin" Tirooyinka ilaa 999,999

1. Qor tirada ku muujisan sawirrada hoose.



2. Abakas kasta ku muuji tirada ku hoos qoran.



3. Dhammaystir Tusahan.

Astirada Tirada	Tirada Eray ahaan
501	Shan boqol iyo kow
	Kun saddex boqol iyo laba
402751	
159036	
61385	
	Sagaal boqol kun saddex boqol iyo afar
578942	
	Siddeed kun iyo shan
791024	
102485	

4. Ku qor meesha bannaan tirada ku habboon.

8942	8943
27809	
3172	
4618	
974261	

13719	13720	13721
	19000	
	52468	
	185	
	1009	

7859	7860
	92451
	790624
	56782
	864251

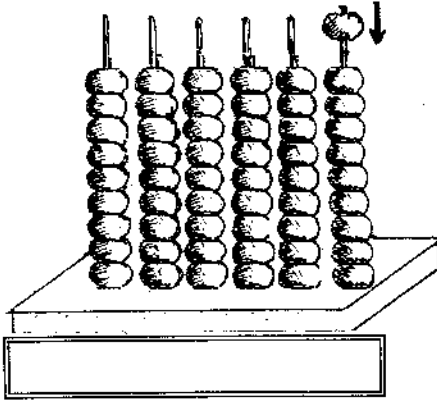
5. \triangle Kasta ku qor summadda $>$, $<$ ama $=$

- | | | | | | |
|--------|-------------|----------|-------|-------------|--------|
| 72560 | \triangle | 42135 | 6528 | \triangle | 7423 |
| 972 | \triangle | 995 | 80754 | \triangle | 209461 |
| 4632 | \triangle | 4636 - 4 | 8682 | \triangle | 8680+2 |
| 78694 | \triangle | 78675 | 17264 | \triangle | 97860 |
| 142675 | \triangle | 12562 | 20567 | \triangle | 20782 |

6. Ku muuji tusaha hoose qiime-roggedka tirooyinkan.
56231, 10200, 118015, 805, 3210, 40210

Boqol kun	Toban kun	Kun	Boqol	Tobnaad	Koowaad
	5	6	2	3	1

Tirooyinka ilaa boqol Malyan.

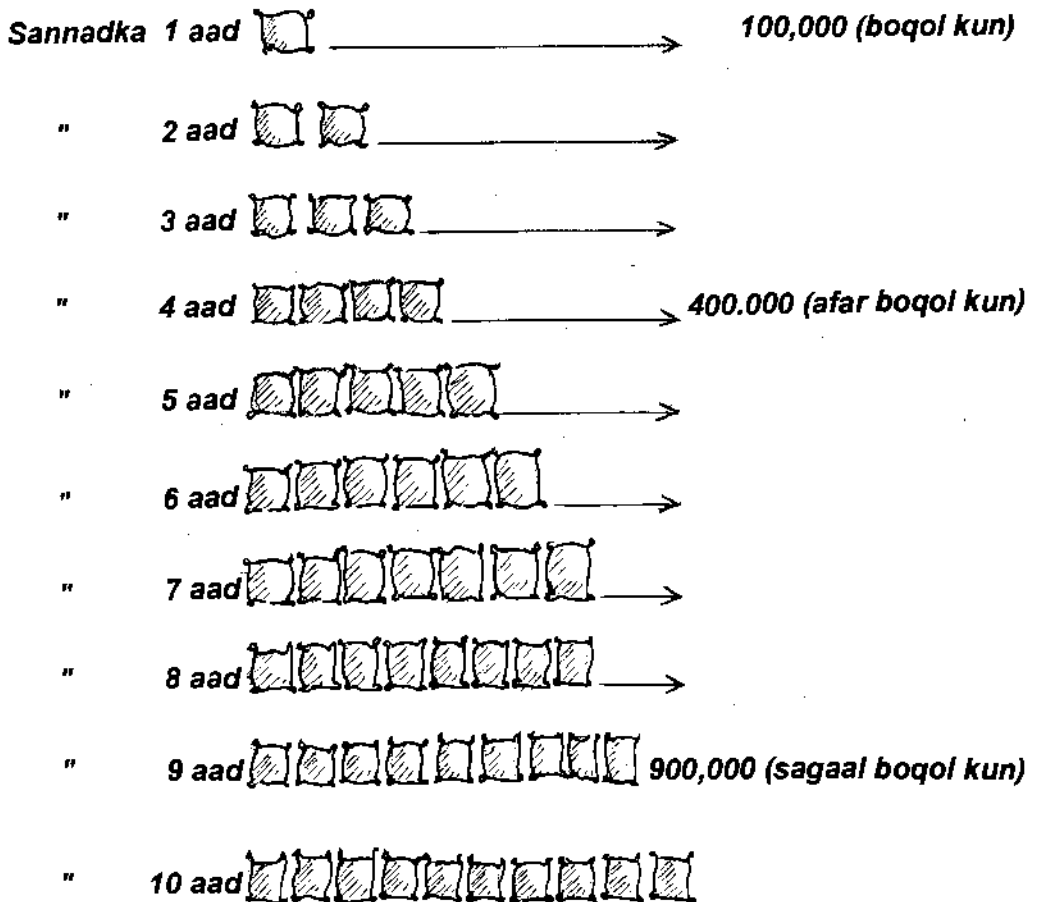


1. Waa maxay wadarta
999,999 iyo 1

$$\begin{array}{r} 999999 \\ +1 \\ \hline \end{array}$$

1,000,000
Tiradan waxaa loo akhriyaa
Hal malyan.

2. Beer ayaa ka soo go'da sannadkiiba boqol kun loor oo mesaggo (haruur) ah. Dhammaystir tusahan soo socda.



Haddaba, beerta toban sanno ka dib waxaa ka soo go'a toban boqol kun loor taas oo ah 1,000,000 loona akhriyo hal malyan.

1. U qor tirooyinka soo socda eray ahaan sida:
1,000,040 Hal malyan iyo afartan.

- i) 2,000,000 ii) 3,000,000 iii) 12,500,000
iv) 7,478,321 v) 42,467,320 vi) 38,700,500
vii) 5,671,422 viii) 4,108,210 ix) 19,200,000

2. Dhammaystir tuseyaasha hoose

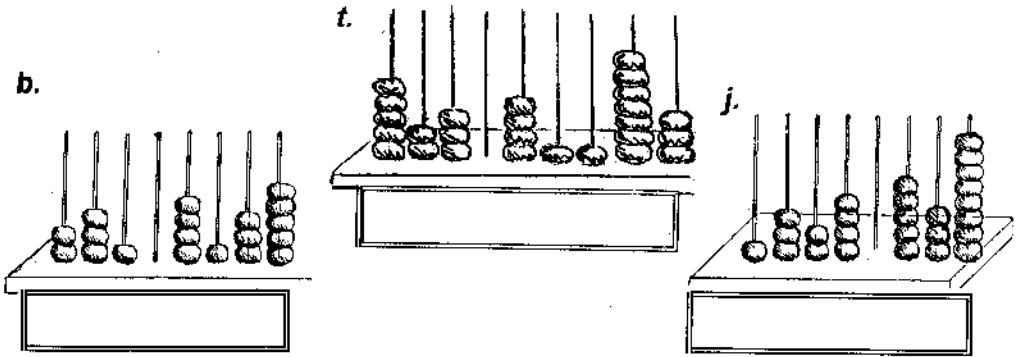
b.

Tiro	Tirada eray ahaan
32,000,000	Soddon iyo laba Malyan
	Laba malyan iyo sagaashan
	Lix iyo toban malyan iyo toban
	Siddeed malyan soddon iyo shan
	Toddobaatan malyan

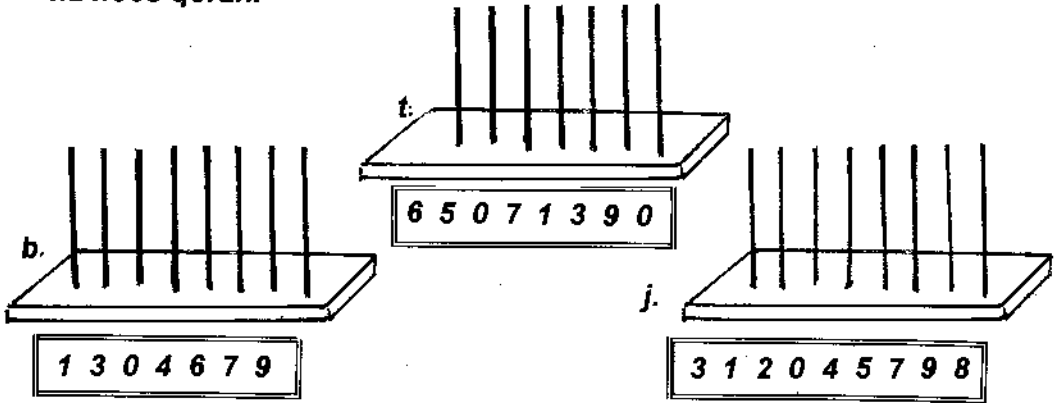
f.

Tirada ka horreysa	Tirada u dhexeysa	Tirada ka dambeysa
81,352,299	81,352,300	81,352,301
	29,390,310	
	4,980,300	
	7,951,935	
	36,024,800	
	2,303,489	
	999,999,999	

1. Qor tirada ku muujisan abakasyada hoose



2. Abakasyada soo socda ku muuji tirooyinka mid walba ku hoos qoran.



3. Dhammaystir Tusahan

Tiro	boqol malyan	toban malyan	malyan	boqol kun	toban kun	kun	boqol	toban	koowaad
13487612	0	1	3	4	8	7	6	1	2
8968023									
124,781,504									
89235142									
8769023									
1987401									

4. \triangle Kasta ku qor Summadda $>$, $<$ ama $=$

24,834,013 \triangle 24,749,812

138,674,114 \triangle 138,675,114

7,840,315 \triangle 7,840,320 - 5

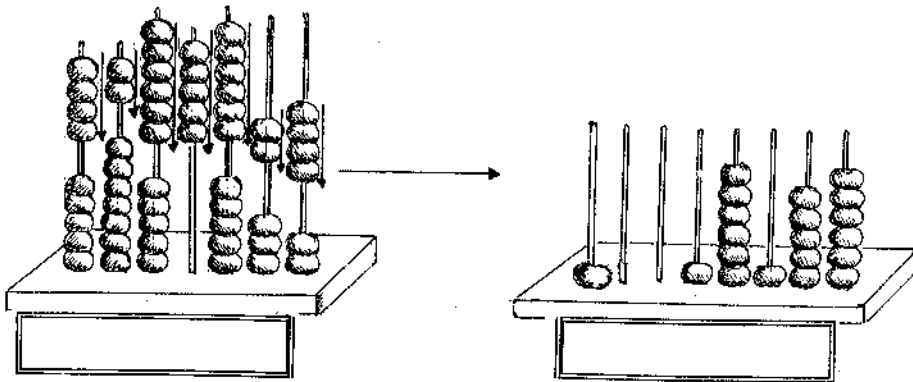
14,031,817 \triangle 14,918,323

3,849,021 \triangle 3,848,021

4,630,022 \triangle 9,333,146

5,544,324 \triangle 8,632,153

Isugeynta tirooyinka ilaa 9 god.



	1 000,000	100000	1000	
4265624	= 4 000,000	+ 200000	+ 60000	+ 5000 + 600 + 20 + 4
+ 5750532	= 5 000,000	+ 700000	+ 50000	+ 0000 + 500 + 30 + 2
10016156	10,000,000	+ 000000	+ 10000	+ 6000 + 100 + 50 + 6

Layli

I. Raadi wadarta tirooyinka hoose, adigoo labada su'aalood ee hore ku sameynaya ABAKAS.

1) 30256178
+ 26895734

2) 834972135
+ 120348675

3) 76485690
+ 94776432

4) 3476125
+ 2321063

5) 25469274
+ 21320615

6) 3218572
+ 4153205

7) 3789564
+ 9675341

8) 478946321
+ 342780851

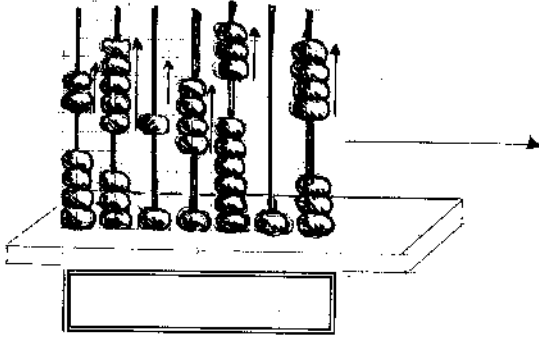
9) 132875609
+ 285687931

10) 3241672
2121011
+ 1505202

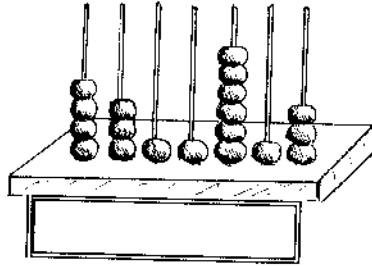
11) 1232346
6501310
+ 2143202

12) 2746356
1141432
+ 3001200

Kalagoynta tirooyinka ilaa 9 god.



$$\begin{array}{r} 6825917 \\ - 2514304 \\ \hline \end{array}$$



$$\begin{array}{r} 6825917 \\ - 2514304 \\ \hline 4311613 \end{array}$$

Layli

Raadi Faraqa tirooyinkan

$$\begin{array}{r} 1) 697875 \\ - 263521 \\ \hline \end{array}$$

$$\begin{array}{r} 2) 42786396 \\ - 30120063 \\ \hline \end{array}$$

$$\begin{array}{r} 3) 57469258 \\ - 23015043 \\ \hline \end{array}$$

$$\begin{array}{r} 4) 8653427 \\ - 2763248 \\ \hline \end{array}$$

$$\begin{array}{r} 5) 894625772 \\ - 237863964 \\ \hline \end{array}$$

$$\begin{array}{r} 6) 5976368 \\ - 4848759 \\ \hline \end{array}$$

$$\begin{array}{r} 7) 86852791 \\ - 54631280 \\ \hline \end{array}$$

$$\begin{array}{r} 8) 6573027 \\ - 2451025 \\ \hline \end{array}$$

$$\begin{array}{r} 9) 7564069 \\ - 2341057 \\ \hline \end{array}$$

$$\begin{array}{r} 10) 875008 \\ - 365739 \\ \hline \end{array}$$

$$\begin{array}{r} 11) 8000034 \\ - 3554835 \\ \hline \end{array}$$

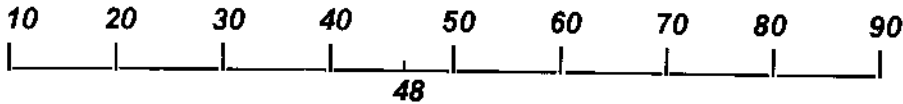
$$\begin{array}{r} 12) 8505460 \\ - 5467435 \\ \hline \end{array}$$

Mas'alooyin

1. Reer tuulo deggan ayaa kala leh 35428 neef oo lo' ah iyo 65978 neef oo ari ah. Immisa neef ayaa ay leeyihiin?
2. Warshad baabuurta sameysa ayaa soo saartay sannadkii 1980kii 834,710 oo baabuur 1981 kii 943181 baabuur, 1982 kiina 4102813 baabuur. Haddaba warshaddu immisa baabuur ayaa ay soo saartay saddexdaas sano?
3. Laba buurood ayaa midda hore dhulka ka sarreysa 8536142 mitir, midda labaadna waxa ay ka sarreysaa 4350876 mitir, middee ayaa jooggeedu dheer yahay? waa maxay faraqa jooggooda?
4. Laba magaalo ayaa tan hore dadka ku nool tiradoodu ay tahay 6934705 qof, magaalada labaadna waxa ku nool 3496756 qof. Labada magaalo middee ayaa dad badan? Raadi faraqooda?
5. Magaalo ayaa dadka ku nool ay kala yihiin sidan, rag 489765, dumar 751403 iyo Carruur 592872. Guud ahaan magaaladaasi dadka ku nool waa immisa tiradooda?
6. Shirkad moos dhoonisa ayaa dhoofisey sannadkii 1993kii moos dhan 437891256 oo kartoon sanadkii 1994kii waxa ay dhoofisey 389765421 kartoon. Immisa kartoon ayaa ay shirkaddu dhoofisay labada sano?
7. Laba baabuur ayaa kala socday 5369602 Km iyo 657648 Km muddo sannad ah. Waa immisa faraqooda?

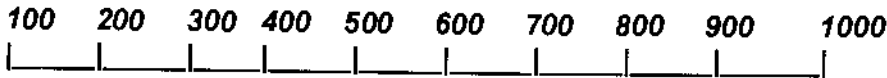
U duubid tiro 10ka ama 100ka ay u dhowdahay

1. U fiirso xarriiqda tirada hoose waxa ay muujinaysaa dhufsanayaasha toban:



48 waxa ay u dhexeysaa 40 iyo 50 laakiin waxa ay u dhowdahay 50.
62 waxa ay u dhexeysaa 60 iyo 70 laakiin waxa ay u dhowdahay 60.

2. Xarriiqda tirada ee hoose haddii aad u fiirsato, waxa ay muujinaysaa dhufsanayaasha boqol



427 waxa ay u dhexeysaa 400 iyo 500 laakiin waxa ay u dhowdahay 400.
678 waxa ay u dhexeysaa 600 iyo 700 laakiin waxa ay u dhowdahay 700.

Tirooyinka ku dhammaada 1 ilaa 49 hoos ayaa loo duubaa, kuwa ku dhammaada 50 ilaa 99 kor ayaa loo duubaa

Tusaale

16	Waxa ay u dhowdahay	20
24	Waxa ay u dhowdahay	20
28	Waxa ay u dhowdahay	30
263	Waxa ay u dhowdahay	300
67125	Waxa ay u dhowdahay	67100
3650	Waxa ay u dhowdahay	3700
12	Waxa ay u dhowdahay	10

Layli

U duub tirooyinka soo socda tobanka ugu dhow.

1) 45, 235, 328, 3515, 525

2) U duub tirooyinka soo socda boqolka ugu dhow.

89, 240, 1349, 46751, 31450

3) U duub tirooyinka soo socda kumaadka ugu dhow.

945, 7616, 9855, 16779, 59605

4) U duub tirooyinka soo socda tobanka iyo boqolka ugu dhow.

55, 345, 95, 115, 89, 525, 35, 250, 210, 350, 75, 14

Iskudhufasho

Tusaale Haddii halkii ukun qiimaheedu yahay 212 shilin, waa immisa qiimaha 412 xabbo oo ukun ah?

X	400	10	2	412
200	80000	2000	400	82400
10				
2				
212				

$$\begin{array}{r}
 412 \\
 \times 212 \\
 \hline
 824 \text{ Ku dhufashada koowaadka} \\
 4120 \text{ Ku dhufashada tobnaadka} \\
 + 82400 \text{ Ku dhufashada boqolaadka} \\
 \hline
 87344
 \end{array}$$

Layli

Raadi taranka tirooyinkan

$$\begin{array}{ccccc}
 1) \ 357 & 2) \ 980 & 3) \ 102 & 4) \ 874 & 5) \ 632 \\
 \times 246 & \times 24 & \times 201 & \times 426 & \times 138 \\
 \hline & \hline & \hline & \hline & \hline
 \end{array}$$

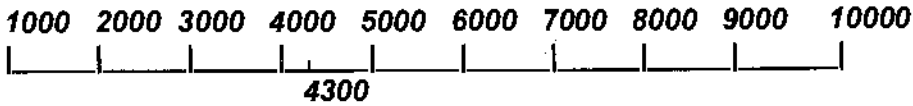
6) Dhammaystir tusahan

X	500	30	1	531
100				
40				
2				
142				

- 7) Haddii hal gasac oo yaanyo ah miisaankeedu yahay 236 garam, haddaba waa immisa garam 367 gasacadood?
- 8) Beer ayaa waxa ku beeran 172 geed oo liin ah, geed kastana waxa ku yaal 315 xabbo oo Liin ah, immisa xabbo oo liin ah ayaa ku taal geedaha oo dhan?
- 9) Maalintii waa 1440 daqiiqo. Waa immisa daqiiqo 63 maalmood?
- 10) Haddii culayska loor messeggio ahi yahay 50 Kg. Waa immisa culayska 825 loor?
- 11) Qof ayaa maalintiiba mushaarkiisu yahay 5451 shilin. Immisa ayaa uu qaadanayaa 427 maalmood?

Iskudhufasho: Duubid Tiro

U fiirso xarriiqda tirada hoose waxa ay muujinaysaa dhufsanayaasha boqol.



5700 Waxa ay u dhexeysaa 5000 iyo 6000 waxa ayna u dhowdahay

4300 waxa ay u dhexeysaa iyo 5000 waxa ayna u dhowdahay

Tusaale

815 815 waxa ay u dhowdahay 800
 X 216 216 waxa ay u dhowdahay 200

Marka $800 \times 200 = 160,000$ waa 6 god.
 Haddaba taranta 815 iyo 216 waxa ay noqonaysaa 6 god

Taas oo ah 815
 X 216

 4890
 815
 1630

176040 ----- Tarankan waa 6 god.

Layli

I. U duub tiro kasta boqolaadka ay u dhowdahay.

$$1) 825 \quad 2) 356 \quad 3) 105$$

$$4) 645 \quad 5) 278 \quad 6) 721$$

$$7) 158 \quad 8) 492 \quad 9) 520$$

II. Adiga oo adeegsanaya duubidda raadi inta god ay yeelanayso taran kasta.

$$\begin{array}{r} 1) 395 \\ X 127 \\ \hline \end{array} \quad \begin{array}{r} 2) 512 \\ X 75 \\ \hline \end{array} \quad \begin{array}{r} 3) 925 \\ X 246 \\ \hline \end{array} \quad \begin{array}{r} 4) 287 \\ X 372 \\ \hline \end{array}$$

$$\begin{array}{r} 5) 319 \\ X 102 \\ \hline \end{array} \quad \begin{array}{r} 6) 225 \\ X 489 \\ \hline \end{array} \quad \begin{array}{r} 7) 139 \\ X 357 \\ \hline \end{array} \quad \begin{array}{r} 8) 259 \\ X 67 \\ \hline \end{array}$$

$$\begin{array}{r} 9) 125 \\ X 365 \\ \hline \end{array} \quad \begin{array}{r} 10) 775 \\ X 627 \\ \hline \end{array}$$

Isu qaybin

Tusaale

Si aan u raadino qaybta $221 \div 17$, waxa aan raacaynaa talaabooyinkan

0	1	3	2 boqolaad $\div 17$
			22 tobnaad $\div 17$
			51 $\div 17$

17	221	
	000	

	221	
	170	

	51	
	51	

	00	

Jawaabtu waa
 $221 \div 17 = 13$

I. Raadi qaybta iyo Haraaga.

- | | | |
|--------------------|---------------------|----------------------|
| 1. $1361 \div 24$ | 2. $2625 \div 35$ | 3. $3299 \div 75$ |
| 4. $1627 \div 39$ | 5. $36485 \div 97$ | 6. $1851115 \div 35$ |
| 7. $12413 \div 59$ | 8. $815856 \div 23$ | 9. $223008 \div 32$ |

II. Mas'alooyin

- 1) Arday ayaa safar waxbarasho u aaddey magaalo warshadeed. Kharashka ku baxay safarka oo dhan waa 644 shilin, haddii arday kasta uu dhiibay 28 shilin, waa immisa tirada ardayda?
- 2) Baabuur ayaa waxa uu qaadey 7659 xabbo oo rooti ah 23 jeer, mar kasta waxa uu qaadayey tiro isle'eg oo rooti ah. Immisa xabbo ayaa uu qaadey markiiba?
- 3) Arday ayaa $\frac{1}{2}$ saac kasta akhrin kara 2490 eray. Immisa eray ayaa uu akhrin karaa halkii daqiiqo?
- 4) Qof ku jira guri ijaar ah ayaa sanadkiiba waxa uu bixiyaa 4140 shilin, bil kasta immisa ayaa uu bixinayaa?

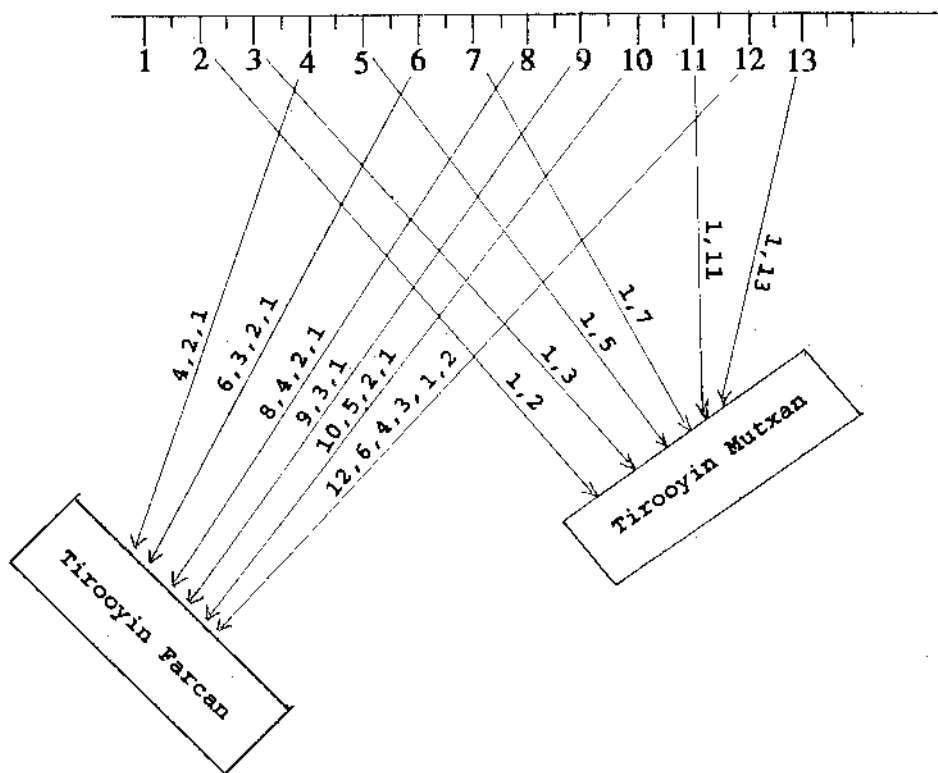
Tiro mutaxan iyo tiro farcan.

- 1) Tiro mutaxan waa tirada leh laba qaybsame oo keli ah, kuwaas oo kala ah hal iyo tirada lafteeda.

Tusaale

$$151 = 151 \times 1$$

$$131 = 131 \times 1$$



- 2) Tirada farcan waa tirada leh wax ka badan laba qaybshe sida 4, 6, 8, 9, 10, 12, ...

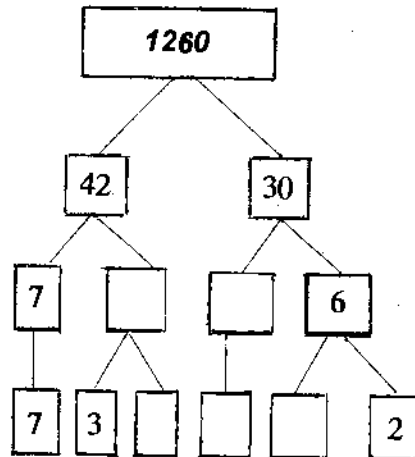
Layli

- 1) Qor tirooyinka mutaxan ee u dhexeeya 1 - 50.
- 2) U kala saar tirooyinkan tiro mutaxan iyo tiro farcan.
7, 49, 11, 121, 13, 169, 78, 42, 105, 113, 91,
26, 63, 100, 33, 31, 47, 29, 77, 41?
- 3) b) Goorma ayaa ay tiradu u qaybsami kartaa 2 ?
t) Ma yihiin tirooyinka soo socda tirooyin aan mutaxnayn?
Sheeg Sababta? 82, 114, 358, 260, 516, 2930.
- 4) Tirooyinka koowaadkoodu yahay eber ma yihiin tirooyin aan mutaxnayn? Sheeg laba sababood oo muhiim ah?
- 5) b) Goorma ayaa ay tiradu u qaybsami kartaa 3 ?
t) Isugee tirooyinka soo socda, ka dibna wadarta soo baxda sheeg in ay tahay tiro mutaxan iyo in kale?
1 iyo 3, 4 iyo 2, 3 iyo 5, 3 iyo 4, 5 iyo 6.
- 6) Isugee laba tiro mutaxan oo mid kasta tahay laba god.
Wadartoodu ma tahay tiro mutaxan? Sheeg sababta?

Isir Mutaxan

Raadi Isirrada maqan

2	1260
2	630
3	315
3	105
5	35
7	7
	1



$$1260 = 2 \times 2 \times 3 \times 3 \times 5 \times 7$$

Marka la raadinayo isirrada mutaxan ee tiro waxaa la raacayaa labadan hab midkood.

- 1- Marka hore tirada ayaa loo furfuraa isirro, kuwaas oo noqon kara tirooyin farcan ka dibna waa la sii wadayaa furfurista ilaa la gaaro isirro mutaxan. Habkan waxaa loo yaqaan geedka isirka.**
- 2- Tirada ayaa waxaa loo qaybiyaa isirka mutaxan ee ugu yar oo u qaybsama tirada, ka dibna tirada kuu soo baxda waxa loo qaybiyaa isirka mutaxan ee ku xiga ilaa la gaaro tirada hal. Habkan waxaa loo yaqaan habka furfurista.**

Layli

I) Tirooyinka soo socda raadi isirradooda mutaxan adiga oo isticmaalaya habka isirka geedka

i) 144 ii) 336 iii) 225

iv) 675 v) 153 vi) 99

vii) 48

II) Raadi isirrada mutaxan ee tirooyinkan hoose adigoo isticmaalaya habka furfurista.

i) 210 ii) 108 iii) 172 iv) 131

v) 28 vi) 525 vii) 114 viii) 342

III) Dhammaystir weerahan soo socda.

i) $2 \times 2 \times 5 \times 7 =$ waa isirrada mutaxan ee _____

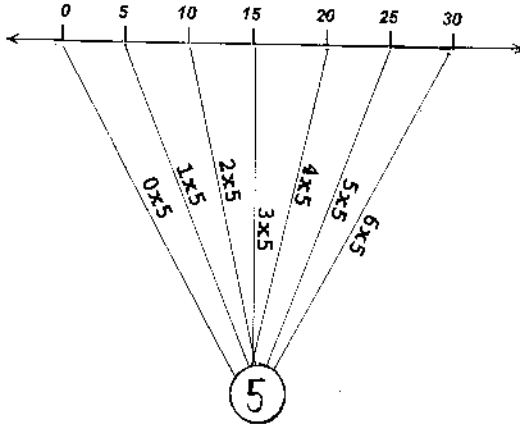
ii) $3 \times 3 \times 11 =$ Waa isirrada mutaxan ee _____

iii) $2 \times 5 \times 7 \times 13 =$ Waa isirrada mutaxan ee _____

iv) $2 \times 17 \times 19 =$ Waa isirrada mutaxan ee _____

Dhufsane

Dhufsanaha tiro idil waa taranta tiradaas iyo tiro kale oo idil.



Tirooyinka 0,5,10,15,20,25,30, ... waa dhufsanayaasha tirada 5.

Tirada eber waa dhufsane tiro kasta.

Wadarta dhufsanayaasha tiro waa dhufsanaha tirada.

Tusaale

1. 27 iyo 30 waa dhufsanayaasha 3, wadartooduna waa dhufsane 3.

$$27 = 3 \times 9 \quad 27 + 30 = 57$$

$$30 = 3 \times 10 \quad 57 = 3 \times 19$$

- 2) Raadi faraaqa dhufsanayaasha 321 iyo 336.

$$336 - 321 = \underline{\quad}$$

Faraqa labadan dhufsane ma yahay dhufsane 3 ?

Layli

- 1) Qor dhufsanayaasha 8 ee ka yar 80.
- 2) Qor dhufsanayaasha 4 ee u dhexeeya 20 iyo 104.
- 3) Raadi dhufsanaha toddobaad ee tirada 6 oo aan ku jirin eber.?
- 4) Hubi in faraaqa dhufsanayaasha 88 iyo 22 uu yahay dhufsane 11?
- 5) Hubi in taranta dhufsanayaasha 77 iyo 33 uu yahay dhufsane 11?
- 6) Tax dhufsanayaasha 5 ee ka weyn 50?

Dhufsanayaasha ay wadaagaan

Laba tiro kasta ama ka badan waxa ay leeyihiin dhufsanayaal badan oo ay wadaagaan, sida $6 \times 8 = 48$.

48 waa dhufsane ay wadaagaan labada tiro ee 6 iyo 8.

Sidaa oo kale 24, 72 waa dhufsanayaal kale oo ay wadaagaan 6 iyo 8.

Tusaale

Raadi dhufsanayaasha ay wadaagaan tirooyinka 6 iyo 9.

Furfuris

Dhufsanayaasha 6 waa 6,12,18,24,30,36,...

Dhufsanayaasha 9 waa 9,18,27,36,45,.... markaa dhufsanayaasha ay wadaagaan 6 iyo 9 waa {18,36,54, ...}

Layli

- 1) Qor dhufsanayaasha ay wadaagaan 4 iyo 8 ee ka yar 40.
- 2) Raadi dhufsanayaasha ay wadaagaan lammaanayaasha tiro ee soo socda.
b) 2 iyo 5 t) 3 iyo 4 j) 7 iyo 8 x) 6 iyo 12.
- 3) Goobo geli dhufsanayaasha ay wadaagaan 2 iyo 3.
0,2,4,6,9,10,14,16,18,20,....
0,3,6,9,12,15,18,21,24,....
- 4) Hubi in 72 iyo 90 ay yihiin dhufsanayaasha ay wadaagaan 8 iyo 9.
- 5) Qor afarta dhufsane ee ugu horreeya ee ay wadaagaan tirooyinka 8,12 iyo 15.
- 6) Tax dhufsanayaasha ay wadaagaan tirooyinka 2 iyo 5 ee u dhexeeya 9 ilaa 100.

Dhufsane yaraha ay wadaagaan

Tusaale

Dhufsanayaasha 3 waa 0,3,6,9,12,15,18,21,24,...

Dhufsanayaasha 4 waa 0,4,8,12,16,20,24,...

12,24,... waa dhufsanayaasha ay wadaagaan 3 iyo 4.

Tirada 12 waa dhufsaneyaraha ay wadaagaan 3 iyo 4.

Layli

1) Qor lixda dhufsane ugu horreeya ee ay wadaagaan

i) 8 iyo 5 ii) 12 iyo 6 iii) 24 iyo 3 iv) 9 iyo 12

v) 16 iyo 8

2) Raadi dhufsaneyaraha ay wadaagaan lammaaneyaasha tirooyinka soo socda

b) 2 iyo 6 t) 9 iyo 6 j) 4 iyo 12

x) 4 iyo 8 kh) 3 iyo 4 d) 3 iyo 4

3) 28 waa dhufsaneyaraha ay wadaagaan 4 iyo _____.

Tusaale

Raadi dhufsaneyaraha ay wadaagaan 6 iyo 8. Adeegso habka gaaban.

$$\begin{array}{l}
 2 \mid 6, 8 \quad DH.Y.W = 2 \times 2 \times 2 \times 3 = 24 \\
 2 \mid 3 \ 4 \\
 2 \mid 3 \ 2 \\
 3 \mid 3 \ 1 \\
 \quad \mid 1
 \end{array}$$

Layli

1) Raadi dhufsaneyaraha ay wadaagaan (dh.y.w) lammaaneyaasha tiro ee soo socda. Adiga oo adeegsanaya habka gaaban.

b) 4 iyo 5 t) 4 iyo 7 j) 3 iyo 6 x) 5 iyo 10

kh) 9 iyo 11 d) 8 iyo 12 r) 3,6 iyo 12 s) 7 iyo 14

sh) 5,8 iyo 9 dh) 9 iyo 13 c) 32 iyo 64

2) Raadi dhufsaneyaraha ay wadaagaan tirooyinkan hoose.

b) 24 iyo 32

t) 18 iyo 54

j) 63 iyo 567

Qaybshaha ugu weyn ee ay wadaagaan

Buuxi meelaha bannaan si aad u hesho qaybsheyaasha tirada 72.

Isirrada	Qaybsheyaasha
$72 = 1 \times \square$	1 iyo \square
$72 = \square \times 36$	\square iyo 36
$72 = 3 \times \square$	3 iyo \square
$72 = 4 \times \square$	4 iyo \square
$72 = \square \times 12$	\square iyo 12
$72 = \square \times 9$	\square iyo 9

Marka la raadinayo qaybsheyaasha tiro waxaa la qoraa dhammaan lammaanayaasha isirrada suuragalka ah ee tirada, isirrada aad heshey ayaa ah qaybsheyaasha tirada.

Layli

I) b) Hubi in tirada 42 ay qaybshe u tahay tirada 210.

t) Raadi qaybsheyaasha
210, 414, 114, 82, 18, 47

II) Waa maxay qaybsheyaasha 36 iyo 40?

36									
40									

Tusaale

Waa maxay qaybsheyaasha ay wadaagaan 16 iyo 24.

Qaybsheyaasha 16 waa 1, 2, 4, 8, 16

Qaybsheyaasha 24 waa 1, 2, 3, 4, 6, 8, 12, 24

Haddaba 1, 2, 4, 8 Waa qaybsheyaasha ay wadaagaan 16 iyo 24.

Qaybsheyaasha ugu weyn ee ay wadaagaan 16 iyo 24 waa 8.

Tusaale

Raadi qaybshaha ugu weyn ee ay wadaagaan tirooyinka 60,84 iyo 126

2	60	84	126
3	30	42	63
	10	14	21

Haddaba qaybshaha ugu weyn ee ay wadaagaan tirooyinka 60,84 iyo 126 waa 6.

Layli

I) Raadi qaybshaha ugu weyn ee ay wadaagaan tirooyinka soo socda, adiga oo isticmaalaya habka furfurista isirrada

b) 52 iyo 80

t) 70 iyo 150

t) 48 iyo 60

j) 240 iyo 360

x) 24,44 iyo 58

kh) 85,140 iyo 225

II) Raadi qaybshaha ugu weyn ee ay wadaagaan adiga oo isticmaalaya habka isirka geedka

1) 18 iyo 24

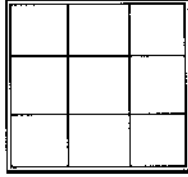
2) 124 iyo 94

Tirooyinka labajibbaaran

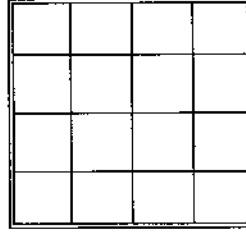
Tusaale



$$2 \times 2 = 4$$



$$3 \times 3 = 9$$



$$4 \times 4 = 16$$

Marka tiro laba jeer la isku dhufto waxaa soo baxaya tirada labajibbaarkeeda.

Labajibbaarka 2 waa $2 \times 2 = 4$

Labajibbaarka 3 waa $3 \times 3 = 9$

Labajibbaarka 4 waa $4 \times 4 = 16$

Layli

1) Raadi labajibbaarka tirooyinka

i) 5 ii) 9 iii) 21 iv) 101 v) 7,402 vi) 21,013

2) Tiradee ayaa run ka dhigaysa weer kasta?

i) $4 \times 4 = \square$ ii) $81 = \square \times \square$ iii) $7 \times \square = 49$

3) Sheeg wadarta labajibbaarrada 5 iyo 9

4) Sheeg faraaqa labajibbaarrada 16 iyo 12

Buuxi Tusaha soo socda

Tirada			3		6			8	10	
Labajibbaarka	1	4		16		25	49			81
Tirada										

Hubinta u qaybsamidda 10 iyo 100

Ku buuxi meelaha bannaan tirada ku habboon

$$150 \div 10 = 15 \quad \text{Maxaa yeeley} \quad 15 \times 10 = 150$$

$$140 \div 10 = \square \quad \text{Maxaa yeeley} \quad \square \times 10 = 140$$

$$2600 \div 10 = \square \quad \text{Maxaa yeeley} \quad \square \times 10 = 2600$$

$$147 \div 10 = \square \quad \text{Haraaguna waa} \quad \square$$

Tiro kasta oo koowaadkeedu eber yahay waxa ay u qaybsami kartaa 10 haraa la'aan.

Ku buuxi meelaha bannaan tirada ku habboon sida

$$1800 \div 100 = 18 \quad \text{Maxaa yeelay} \quad 18 \times 100 = 1800$$

$$2700 \div 100 = \square \quad \text{Maxaa yeelay} \quad \square \times 100 = 2700$$

$$5800 \div 100 = \square \quad \text{Maxaa yeelay} \quad \square \times 100 = 5800$$

Tiro kasta oo koowaadkeedu iyo tobnaadkeedu ay yihiin eber waa u qaybsami kartaa 100 haraa la'aan.

Layli

1) *Triooyinka hoos ku qoran u kala saar kuwa u kala qaybsama 10 iyo 100 haraa la'aan.*

40, 9, 800, 402, 2300, 1002, 120,

220, 400, 90, 73, 550, 300, 10,

2) *Qor 20 tiro oo u qaybsama 10 haraa la'aan iyo 15 tiro oo haraa la'aan u qaybsama 100.*

3) *Waa maxay tirada marka loo qaybiyo 100 qaybteedu ay tahay 6, haraaguna uu yahay 73?*

4) *Ku qor meelaha bannaan summadda $>$, $=$, $<$ midii ku habboon, sida $505 \div 10 > 50$*

b) $320 \div 4 \square 80$

t) $150 \div 6 \square 30$

j) $103 \div 7 \square 12$

x) $4500 \div 100 \square 45$

Hubinta u qaybsamidda 2,5,3

1. Tirada koowaadkeedu dhaban yahay ama eber waa ay u qaybsantaa 2

Tusaale

412 iyo 710 waa ay u qaybsamayaan 2

laakiin 817 iyo 423 uma qaybsamaan 2 waayo koowaadyadu ma aha dhaban ama eber.

2. Tirada koowaadkeedu yahay shan ama eber waa ay u qaybsantaa 5

Sida

775 iyo 610 waa ay u qaybsamaan 5 laakiin 314 iyo 711 uma qaybsamaan 5 waayo koowaadyadoodu ma aha 5 ama eber .

3. Buuxi tusaha soo socda:

Tirada	48	252	831	101	1223
wadarta tirada godadka	$4+8 = 12$				
Tirada oo loo qaybiyo 3	$48 \div 3 = 16$				
Wadarta godadka oo loo qaybiyey 3	$12 \div 3 = 4$				

**Marka aad buuxiso tusaha waxa aad ogaanaysaa sidan:
Tiradu waxa ay u qaybsantaa 3
haddii wadarta godadkeedu ay u qaysanto 3**

Tusaale

- b) 423 waa ay u qaybsantaa 3, waayo wadarta godadka tiradaasi waa 9.
- t) 231 waa ay u qaybsantaa 3, waayo wadarta godadka tiradaasi waa 6.

Layli

- 1) Goorma ayaa ay tirooyinku u qaybsami karaan 2,3, iyo 5?
- 2) Ka sooc tirooyinkan hoose kuwa u qaybsama 2 haraa la'aan.
120, 18, 19, 124, 817, 214, 232, 135, 70,13
- 3) Ka sooc tirooyinkan hoose kuwa u wada qaybsama 2 iyo 5 haraa la'aan.
215, 310, 540, 612, 120, 225, 400, 105, 420.



CABBIRAAD

Ammin: Hab Saacadeedka gh iyo gd



Halkii maalin waa 24 saac. Maalintuna waxa ay bilaabataa habeenkii saqda dhexe, waxa ayna ku eg tahay habeenka xiga saqdiisa dhexe. Habeenka saqda dhexe ilaa duhurkii waa gelin hore (gh) duhurkii ilaa habeenka xiga saqdiisa dhexe waa gelin dambe (gd).

Tusaale ahaan: 4:00 saac ee saqda dhexe ka dib waxa loo qoraa 4gh, 4:00 duhurkii ka dib waxa loo qoraa 4gd.

layli

1) Immisa saacadood ayaa u dhexeeya saqda dhexe iyo saacadaha hoos ku xusan:

- b) 5 gh t) 8 gh j) 11 gh x) 3 gd
kh) 4 gd d) 12^{ka} duhurnimo

2) Axmed ayaa waxa uu u kala socday laba tuulo. Markii uu tuulada hore ka tegayey waqtiga waxa uu ahaa 11:35 gh. Waxa uu tegey tuuladii kale waqtiga marka uu ahaa 3:15 gd. Waqti intee le'eg ayaa uu u kala socday labada tuulo?

3) Immisa saacadood ayaa u dhexeeya duhurkii iyo saacadaha hoos ku xusan:

- b) 2 gh t) 11 gh j) 4 gh x) Saqda dhexe
kh) 10 gd d) 1 gd

4) U qor saacadahan soo socda hab gaaban, adiga oo adeegsanaya gh ama gd:

- b) Saqda dhexe iyo labaatan daqiiqo.
t) Siddeedii oo rubac dhiman ee subaxnimo.
j) 12:00 iyo afartan daqiiqo.
x) Afartii oo dhiman shan iyo toban daqiiqo.

Isku beddelidda Saacad, daqiiqo iyo Il-biriqsi

$1 \text{ Saac} = 60 \text{ daqiiqo}$ $1 \text{ daqiiqo} = 60 \text{ Il-biriqsi}$

Tusaale**3 saac u beddel daqiiqado****Furfuris**

$$\begin{aligned} \text{Haddii } 1 \text{ Saac} &= 60 \text{ daqiiqo markaa,} \\ 3 \text{ Saac} &= 1 \text{ Saac} + 1 \text{ Saac} + 1 \text{ Saac} \\ &= 60 \text{ daqiiqo} + 60 \text{ daqiiqo} + 60 \text{ daqiiqo} \\ &= 3 \times 60 \text{ daqiiqo} \\ &= 180 \text{ daqiiqo.} \end{aligned}$$

Tusaale**240 daqiiqadood u beddel saacad.****Furfuris**

$$\begin{aligned} 1 \text{ daqiiqo} &= \frac{1}{60} \text{ Saac} \\ 240 \text{ daqiiqo} &= 240 \times \frac{1}{60} \text{ saac} \\ &= 4 \text{ Saac} \end{aligned}$$

Tusaale**5 daqiiqo waa immisa il-biriqsi?****Furfuris**

$$\begin{aligned} \text{Haddii } 1 \text{ daqiiqo} &= 60 \text{ il-biriqsi} \\ \therefore 5 \text{ daqiiqo} &= 5 \times 60 \text{ il-biriqsi} \\ &= 300 \text{ il-biriqsi} \\ \text{Haddaba } 5 \text{ daqiiqo} &\text{ waa } 300 \text{ il-biriqsi} \end{aligned}$$

Tusaale**720 il-biriqsi u beddel daqiiqado?****Furfuris**

$$\begin{aligned} \text{Haddii } 1 \text{ il-biriqsi} &= \frac{1}{60} \text{ daqiiqo} \\ \text{Markaa } 720 \text{ il-biriqsi} &= 720 \times \frac{1}{60} \text{ daqiiqo} = 12 \text{ daqiiqo} \end{aligned}$$

Layli

1) U beddel halbeegyada soo socda daqiiqado

b) 9 saac

t) 3½ saac

j) 420 il-biriqsi

x) 120 il-biriqsi

kh) 0.5 saac

d) 4 saac 35 daqiiqo

2) U beddel halbeegyada soo socda saacad

b) 360 daqiiqo

t) 640 daqiiqo

j) 300 il-biriqsi

x) 120 daqiiqo 180 il-biriqsi

kh) 820 il-biriqsi

3) b) Haddii Cali uu 65 daqiiqo beer falayay, 35 daqiiqo uu qoryo (xaabo) guranayey, 50 daqiiqana uu socod ku jiray. Immisa saacadood ayaa ay ku qaadatay hawshiisa oo dhan?

t) Haddii dugsi uu qaato 6 xisadood maalintii, xisaddiina tahay 35 diqiiqo. Immisa saacadood iyo daqiiqo ayaa ay qaadanaysa lixda xisadood?

Isugeynta halbeegyada amminta

Marka la isugaynayo laba amminood ama wax ka badan waa in:
 i) la isugeeyaa halbeegyada isku nooca ah.
 ii) Halbeeg loo beddelo halbeeg kale haddii baahidu ay keento.

Tusaale 1 Isugee

saac	daqiiqo	il-biriqsi
3	25	30
+ 2	11	24
<hr/>		
5	36	54

Tusaale 2 Isugee

saac	daqiiqo	il-biriqsi
4	65	80
5	30	25
<hr/>		
9	95	105
9	60+35	60+45
9+1	35+1	45
<hr/>		
10	36	45

Tusaale 3 Isugee

saac	daqiiqo	il-biriqsi
6	57	48
+ 7	46	52
<hr/>		
13	103	100
13	60+43	60+40
13+1	43+1	40
<hr/>		
14	44	40

Layli

I Raadi wadarta soo socota

1) saac daqiiqo il-biriqsi

5	25	12
+ 9	10	24
<hr/>		

2) saac daqiiqo il-biriqsi

4	15	45
+ 2	20	67
<hr/>		

3) saac daqiiqo il-biriqsi

6	10	28
+ 7	84	64
<hr/>		

4) saac daqiiqo il-biriqsi

8	45	25
+ 5	35	30
<hr/>		

5) saac daqiiqo il-biriqsi

12	0	57
7	75	29
<hr/>		

6) saac daqiiqo il-biriqsi

4	27	25
5	0	67
<hr/>		

II. Raadi wadarta 3 saac, 40 daqiiqo, 25 ilbiriqsi iyo 30 daqiiqo, 67 ilbiriqsi.

III. Haddii Faarax uu 56 daqiiqo iyo 42 ilbiriqsi cararay, Faaduma ay carartay 35 daqiiqo iyo 27 il-biriqsi. Immisa saac ayaa ay cararayaan?

Kala goynta halbeegyada ammintaa

Casharkii hore waxa aan ku soo baranay isugeynta halbeegyada ammintaa. Casharkana waxa aan ku baran doonnaa kala goynta halbeegyada ammintaa.

Marka la kala goynaayo laba amminood waa in:

i) La isku aaddiyo halbeegyada isku nooca ah oo laga bilaabo kala goynta halbeegga hadba kan ugu yar, sida (il-biriqsi).

ii) Laga soo amaahdo halbeegyada waaweyn haddii ay suurageli waydo in la kala gooyo ilbiriqsiyada ama daqiiqadaha. Ka dibna halbeegga weyn wixii laga soo amaahday loo beddelo halbeegga la rabo.

Tusaale 1 Kalagoo

saacad	daqiiqo	Ilbiriqsi
14	40	48
- 9	30	20
<hr/>		
5	10	28

Tusaale 2 Kalagoo

saacad	daqiiqo	Ilbiriqsi
	49	92
6	50	32
- 2	40	46
<hr/>		
4	9	46

Tusaale 3 kalagoo

saacad	daqiiqo	Ilbiriqsi
4	76	
5	18	30
- 2	28	25
<hr/>		
2	48	5

Tusaale 4 Kalagoo

saacad	daqiiqo	Ilbiriqsi
15	87	72
16	28	12
- 5	57	35
<hr/>		
10	30	37

Layli

I. Raadi faraqa amminada soo socda

1) saacad	daqiiqo	Ilbiriqsi	2) saacad	daqiiqo	Ilbiriqsi
16	35	29	19	40	15
- 11	20	14	- 4	14	21

3) saacad	daqiiqo	Ilbiriqsi	4) saacad	daqiiqo	Ilbiriqsi
10	0	48	9	15	30
- 5	30	25	- 4	40	57

5) saacad	daqiiqo	Ilbiriqsi	6) saacad	daqiiqo	Ilbiriqsi
12	0	0	15	6	10
- 7	15	25	- 8	12	35

II. Furfur mas'alada soo socota:

- 1) Nin baaskiil ku safraayey ayaa waxa uu socodkiisa bilaabay 4 saac iyo 35 daqiiqo g.d. Wuxuuna gaaray meeshii uu u socday 6 saac, 45 daqiiqo iyo 20 il-biriqsi g.d soo saar inta saacadood ee uu safar ahaa.

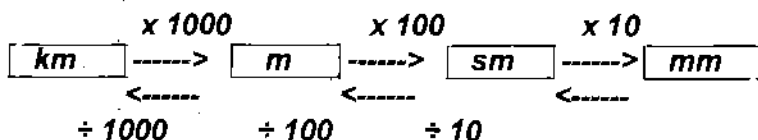
Dherer : Isku beddelidda halbeegyada dhererka

Kiilomitir waxa loo adeegsadaa cabbiraadda fogaanshaha dhaadheer, sida inta u dhexeysa laba magaalo.

Mitirkuna waxa loo adeegsadaa cabbiraadda fogaanshaha yar-yar, sida inta u dhexeysa laba gidaar (derbi).

$$\begin{aligned} 1000 \text{ m} &= 1 \text{ km} \\ 100 \text{ sm} &= 1 \text{ m} \\ 10 \text{ mm} &= 1 \text{ sm} \end{aligned}$$

Shaxda hoose waxa ay kuu muujineysaa sida la isugu beddelo halbeegyada.



Tusaale 1

b) 4000 m u beddel kiilomitir

Furfuris

$$\text{Haddii } 1000 \text{ m} = \frac{1 \text{ km}}{1000}$$

$$\text{Markaa } 4000 \text{ m} = \frac{4000}{1000} \text{ km} = 4 \text{ Km}$$

$$\begin{array}{r} 1000 \overline{) 4000} \\ \underline{4000} \\ 00 \end{array}$$

t) 250m u beddel kiilomitir

Furfuris

waxa aynnu og nahay in

$$1000 \text{ m} = 1 \text{ km}$$

$$\text{Markaa, } 250 \text{ m} = \frac{250}{1000} \text{ km} = \frac{1}{4} \text{ km}$$

Tusaale 2

5 km u beddel m

Furfuris

Waxa aynnu og nahay in

$$1 \text{ km} = 1000 \text{ m}$$

$$\text{Markaa, } 5 \text{ km} = 1000 \times 5 \text{ m} = 5000 \text{ m}$$

Tusaale 3

650 sm u beddel m

Furfuris

Waxa aynnu og nahay in

$$100 \text{ sm} = 1 \text{ m}$$

$$\text{Markaa, } 650 \text{ sm} = \frac{650}{100} = \frac{13}{2} \text{ m} = 6 \frac{1}{2} \text{ m}$$

Tusaale 4

9 Mitir u beddel sm

Furfuris

Waxa aynnu ognahay in

$$1 \text{ m} = 100 \text{ sm}$$

$$\text{Markaa, } 9 \text{ m} = 100 \times 9 \text{ sm} = 900 \text{ sm}$$

Tusaale 5

1000 mm u beddel sm

Furfuris

Waxa aynnu ognahay in

$$1 \text{ sm} = 10 \text{ mm} \quad 1000$$

$$\text{Markaa, } 1000 \text{ mm} = \frac{1000}{10} \text{ sm} = 100 \text{ Sm}$$

Tusaale 6

200 sm u beddel mm

Furfuris

Waxa aynnu ognahay in 1 sm = 10 mm

$$\begin{aligned} \text{Markaa, } 200 \text{ sm} &= 200 \times 10 \text{ mm} \\ &= 2000 \text{ mm} \end{aligned}$$

Layli

I. Buuxi khaanadaha maran (bannaan)

- 1) 1200 km = m 2) mm = 20 sm 3) 40 m = mm
 4) 300 m = sm 5) km = 2500 m 6) 35 Sm = mm

II. Halbeegyada soo socda u beddel sm

- 1) 6 km 2) 70 mm 3) 400 m
 4) 80 m 5) 10 km 6) 1000 mm

III. Halbeegyada soo socda u beddel mitir

- 1) 8 km 2) 8060 mm 3) 2560 sm
 4) 8960 sm 5) 2500 km 6) 9080 mm

Isugeynta halbeegyada dhererka

Marka la isugeynayo halbeegyada dhererka waa in la tixgeliyaa tallaabooyinka soo socda:

- i) Waa in la isku beegaa halbeegyada isu eg.
 ii) Isugeynta waa in laga bilaabaa halbeegga hadba kan ugu yar sida sentiimir.
 iii) Boqolka sentimitir waa in loo beddelaa hal mitir marka wadarta sentimitirrada ay ka bataan 100 loona geeyo mitirrada.
 iv) 1000ka mitir waa in loo rogo hal kilomitir, marka wadarta mitirrada ay ka bataan 1000 loona geeyo kilomitirada.

Bal u firso tusaalooyinka soo socda

Tusaale 1

m	sm
12	39
+ 4	15
16	54

Tusaale 2

km	m
19	365
25	435
+ 11	221
55	1021
55 + 1	(1000) + 21
56	21

Tusaale 3

Km	m	Sm
8	380	80
12	390	30
33	535	15
53	1305	125
53	(1000) + 305	(100) + 25
53 + 1	305 + 1	25
54	306	25

Tusaale 4

km	m	sm	mm
2	486	35	5
+ 5	674	89	12
7	1160	124	17
7	(1000) + 160	(100) + 24	(10) + 7
7 + 1	160 + 1	24 + 1	7
8	161	25	7

Layli

I. Isugee halbeegyada soo socda:

<p>1) <table style="border-collapse: collapse; width: 100%;"> <thead> <tr><th>km</th><th>m</th><th>sm</th></tr> </thead> <tbody> <tr><td>12</td><td>80</td><td>25</td></tr> <tr><td>+ 15</td><td>45</td><td>50</td></tr> <tr><td colspan="3" style="border-top: 1px dashed black;"></td></tr> <tr><td>27</td><td>125</td><td>75</td></tr> </tbody> </table></p>	km	m	sm	12	80	25	+ 15	45	50				27	125	75	<p>2) <table style="border-collapse: collapse; width: 100%;"> <thead> <tr><th>km</th><th>m</th><th>sm</th></tr> </thead> <tbody> <tr><td>33</td><td>640</td><td>68</td></tr> <tr><td>+ 18</td><td>505</td><td>70</td></tr> <tr><td colspan="3" style="border-top: 1px dashed black;"></td></tr> <tr><td>51</td><td>1145</td><td>138</td></tr> </tbody> </table></p>	km	m	sm	33	640	68	+ 18	505	70				51	1145	138	<p>3) <table style="border-collapse: collapse; width: 100%;"> <thead> <tr><th>km</th><th>m</th><th>sm</th></tr> </thead> <tbody> <tr><td>55</td><td>354</td><td>90</td></tr> <tr><td>12</td><td>850</td><td>25</td></tr> <tr><td>+ 13</td><td>66</td><td>45</td></tr> <tr><td colspan="3" style="border-top: 1px dashed black;"></td></tr> <tr><td>70</td><td>1270</td><td>160</td></tr> </tbody> </table></p>	km	m	sm	55	354	90	12	850	25	+ 13	66	45				70	1270	160																		
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II. Furfur mas 'alooyinkan

- 1) Cali dhererkiisu waa 1.50m, walaashiisuna waa 12 Sm, dhererka Aabbihiisuna waa 195 Sm, soo saar wadarta dhererradooda?
- 2) Cabdi waxa uu u foofiay lo'diisa 3km iyo 40m meel u jirta gurigiisa, duhurkiina waxa uu u kaxeeyey fogaan 5km iyo 90m si ay uga soo cabto webiga. Soo saar fogaanta ay isu jiraan guriga cabdi iyo webiga?

Kala goynta halbeegyada dhererka

Casharkii hore waxa aan ku soo baranay isugeynta halbeegyada dhererka. Casharkanna waxa aan ku baran doonnaa kala goynta halbeegyada dhererka.

Marka la kala goynayo halbeegyada dhererka waa in

- i) La isku beegaa halbeegyada isu'eg.
- ii) Kala goynta laga bilaabaa halbeegga hadba kan ugu yar sida sentimitir ama miliimitir.
- iii) Laga soo amaahdo mitirrada hal loona beddelo sentiimitir, isla markaana loo geeyo sentiimitirrada marka aaney suuro gal ahayn in la kala gooyo sentiimitirrada. Sidaas oo kale waa in laga soo amaahdo kilomitirada hal loona beddelo mitir, loona geeyo mitirada marka aanay suuro gal ahayn in la kala gooyo mitirada.

Kalagoo

Tusaale 1

$$\begin{array}{r}
 \text{km} \quad \text{m} \\
 25 \quad 535 \\
 - 13 \quad 212 \\
 \hline
 12 \quad 323
 \end{array}$$

Tusaale 2

$$\begin{array}{r}
 \text{km} \quad \text{m} \quad \text{sm} \\
 \overset{36}{\cancel{37}} \overset{1000}{\curvearrowright} \overset{104}{\cancel{42}} \overset{100}{\curvearrowright} \overset{130}{\cancel{30}} \\
 - 28 \quad 65 \quad 75 \\
 \hline
 8 \quad 976 \quad 55
 \end{array}$$

Tusaale 3

$$\begin{array}{r}
 \text{km} \quad \text{m} \\
 48 \quad 1312 \\
 \overset{1000}{\curvearrowright} \cancel{49} \quad 312 \\
 - 20 \quad 678 \\
 \hline
 28 \quad 634
 \end{array}$$

Tusaale 4

$$\begin{array}{r}
 \text{m} \quad \text{sm} \\
 7 \quad 105 \\
 \overset{100}{\curvearrowright} \cancel{8} \quad 5 \\
 6 \quad 9 \\
 \hline
 1 \quad 96
 \end{array}$$

Layli

I. Kala goo halbeegyada soo socda

1) m	sm	2) sm	mm	3) m	sm
7	25	60	8	20	60
4	12	- 25	2	- 8	70
<hr/>		<hr/>		<hr/>	

Cabirraad

4) <i>sm</i>	<i>mm</i>	5) <i>km</i>	<i>m</i>	6) <i>km</i>	<i>m</i>
70	5	14	940	6	5
- 25	9	- 11	760	- 2	9
-----		-----		-----	

7) <i>km</i>	<i>m</i>	<i>sm</i>	8) <i>km</i>	<i>m</i>	<i>Sm</i>	9) <i>m</i>	<i>sm</i>	<i>mm</i>
4	6	27	10	8	78	9	60	2
- 1	7	80	- 2	9	89	- 2	80	8
-----			-----			-----		

10) <i>km</i>	<i>m</i>	<i>sm</i>	<i>mm</i>
12	260	54	6
- 5	675	79	7

ii) Furfur mas'alooyinka soo socda:

1) Duqa magaalada Muqdishu ayaa dawladda hoose ka codsaday in ay dhisaan derbi wareega dhererkiisu yahay 1Km. Haddii dowladda Hoose ay dhistay 195 mitir maalinta ugu horreysa, Immisa mitir ayaa dhismada derbigga u haray?

2) Aabahay dhererkiisu waa 195 *sm*, aniga dhererkayguna waa 136 *sm*. Haddaba, Aniga iyo Aabahay kumaa dheer?

3) Xarig dhererkiisu yahay 598 *m* iyo 50 *sm*, ayaa ay Caasha ka goosatay 305 *m* iyo 70 *sm*. Soo saar inta soo hartay?

4) Guri labo dabaq ah ayaa jooggiisu yahay 19*m* iyo 59 *sm*. Haddii dabaqa hoose jooggiisu yahay 9*m* iyo 55 *sm*. Waa immisa joogga dabaqa sare?

5) Haddii wareega saddexagal uu yahay 89.6 *sm*, labo dhinac oo ka mid ah saddexagalka dhererradooda kala yihiin 36.2 *sm* iyo 15.9 *sm*. Soo saar dherarka dhinaca saddexaad?

Isku dhufashada halbeegyada dhererka iyo tiro

Marka la iskudhufanayo halbeegyada dhererka iyo tiro waa in:

- i) Tirada lagu dhufaa halbeegga ugu yar sida sentimitir.
- ii) Halbeegga sentimitir loo beddelaa mitir, haddii taranka tirada iyo sentimitirka ka badan tahay 100 sentiimitir.
- iii) Tirada lagu dhufto mitir, isla markaana lagu daraa halbeegga mitirka ka soo baxay tallaabada 2 aad.
- iv) Halbeegga mitirka loo beddelo kiilomitir, haddii taranka tirada iyo mitirka ka badan tahay 1000 mitir.
- v) Tirada lagu dhufto halbeegga kiilomitirka, isla markaana lagu daro kiilomitirka ka soo baxay tallaabada 4aad.

Soo saar taranka

Tusaale 1

m	sm
5	32
X	3
15	
	96

Tusaale 2

m	sm
5	62
X	2
10	
	124

Tusaale 3

km	m
5	35
X	4
20	
	140

$$\begin{array}{r}
 10+1 \quad \leftarrow (100)+24 \\
 11 \quad 24
 \end{array}$$

Tusaale 4

km	m
7	345
X	6
42	
	2070
42+2*	(2000)+70
44	70

Tusaale 5

km	m	sm
32	55	70
X		9
288		
	495	630
288	495+6*	(600)+30
288	501	30

Tusaale 6

km	m	sm
9	585	86
X		8
72		
	4680	688
72	(4000)+680*	(600)+88
72+4*	680+6*	88
76	686	88

Layli

I. Soo saar taranka tirada iyo halbeegyada.

$$\begin{array}{r} 1) \text{ m} \quad \text{sm} \\ 3 \quad 24 \\ X \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 2) \text{ m} \quad \text{sm} \\ 5 \quad 54 \\ X \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3) \text{ m} \quad \text{sm} \\ 12 \quad 78 \\ X \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 4) \text{ km} \quad \text{sm} \\ 8 \quad 95 \\ X \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5) \text{ km} \quad \text{m} \\ 2 \quad 465 \\ X \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad \text{km} \quad \text{m} \\ 16 \quad 512 \\ X \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7) \text{ km} \quad \text{m} \quad \text{sm} \\ 9 \quad 150 \quad 80 \\ X \quad \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8) \text{ km} \quad \text{m} \quad \text{sm} \\ 23 \quad 490 \quad 50 \\ X \quad \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9) \text{ km} \quad \text{m} \quad \text{sm} \\ 6 \quad 123 \quad 12 \\ X \quad \quad 14 \\ \hline \end{array}$$

II. Furfur mas'alooyinkan

- 1) Xaliimo ayaa 8 gabdhood middiiba u soo iibisay dhar dhererkiisu yahay 354m iyo 84 sm. Waa immisa dhererka dharka ay u soo iibisay gabdnaha oo dhan?
- 2) Haddii Cali uu leeyahay 5 beerood oo ay beertiiba dhererkeedu yahay 2 km iyo 590 m. Soo saar dhererka 5ta beerood ?
- 3) Raadi dhererka 15 duub oo dun ah, oo middiiba dhererkeedu yahay 175m iyo 35 sm?
- 4) Guriga Jaamac iyo dugsiga waxa ay isu jiraan 470 m. Subax kasta waa uu u lugeeyaa, duhurkiina lug buu ku soo noqdaa si uu u qadeeyo, casarkii waa uu ku noqdaa, maqribkiina lug buu uga soo hoydaa. Haddaba immisa kiilomitir ayaa uu maalintii lugeeyaa?

Isu qeybinta halbeegyada dhererka iyo tiro

Si aan isugu qaybinno halbeegyada dhererka iyo tiro waa in:

- i) Laga bilaabo qaybinta halbeegyada tirada halbeegga ugu weyn sida km ama m
- ii) Haraaga u beddel mitir ama sentimitir.
- iii) Haraaga aad beddeshay ku dar mitirada ama sentiimitirada, ka dibna u qaybi tirada.

Soo saar qaybta

Tusaale 1

$$16m \ 75 \text{ Sm} \div 5$$

Furfuris

$$3m \ 35 \text{ sm}$$

$$\begin{array}{r} 5 \overline{) 16m \ 75 \text{ sm}} \\ 15 \end{array}$$

$$\begin{array}{r} \textcircled{1m} \ 75 \text{ sm} \\ \rightarrow 100 \text{ sm} \end{array}$$

$$\begin{array}{r} 175 \text{ sm} \\ 150 \end{array}$$

$$\begin{array}{r} 25 \\ 25 \end{array}$$

$$\begin{array}{r} 00 \end{array}$$

Tusaale 2

$$18 \text{ km } 96m \text{ u qaybi } 4$$

Furfuris

$$4 \text{ km } 524 \text{ m}$$

$$\begin{array}{r} 4 \overline{) 18 \text{ km } 96m} \\ 16 \end{array}$$

$$\begin{array}{r} \textcircled{2 \text{ km}} \ 96 \text{ m} \\ \rightarrow 2000 \text{ m} \end{array}$$

$$\begin{array}{r} 2096 \\ 20 \end{array}$$

$$\begin{array}{r} 9 \\ 8 \end{array}$$

$$\begin{array}{r} 16 \\ 16 \\ 00 \end{array}$$

Tusaale 3

$$45 \text{ km } 18m \ 36 \text{ sm} \\ \text{u qaybi } 6$$

Furfuris

$$7 \text{ km } 503m \ 6 \text{ sm}$$

$$\begin{array}{r} 6 \overline{) 45 \text{ km } 18m \ 36 \text{ sm}} \\ 42 \end{array}$$

$$\begin{array}{r} \textcircled{3 \text{ km}} \ 18m \ 36 \text{ sm} \\ \rightarrow 3000m \ 36 \text{ sm} \end{array}$$

$$\begin{array}{r} 3018m \ 00 \\ 30 \end{array}$$

$$\begin{array}{r} 00 \ 18 \\ 18 \end{array}$$

$$\begin{array}{r} 00 \end{array}$$

Layli

I. Raadi Qaybta

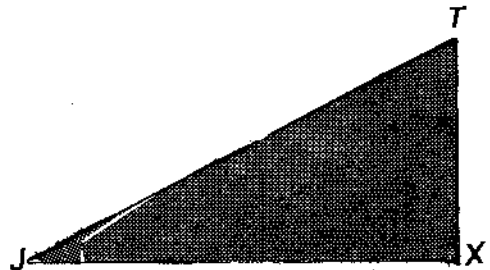
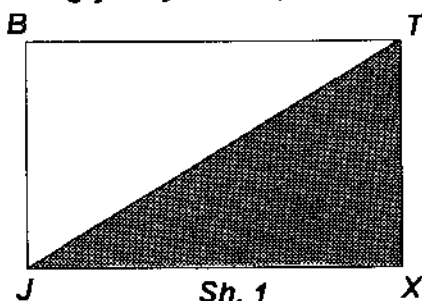
- | | |
|--------------------------|------------------------|
| 1) 45m 80sm ÷ 6 | 2) 36km 45m ÷ 3 |
| 3) 725Km 38m ÷ 8 | 4) 95m 35sm ÷ 5 |
| 5) 49km 402m 40sm ÷ 8 | 6) 221km 778m 63sm ÷ 9 |
| 7) 16km 976m 56sm 5m ÷ 5 | 8) 128m 25sm 8mm ÷ 6 |

II. Furfur mas'alooyinkan

- 24 nin ayaa qoday god tubbo-biyood la geliyo oo dhererkiisu yahay 1km 800m haddii nimanku u wadaagaan shaqada si isku mid ah, soo saar dhererka godka mid kasta in uu qodo ay tahay?
- Bare ayaa 21 arday si isle'eg ugu qaybiyay dhar dhererkiisu yahay 38m iyo 75sm. Intee dhar ah ayuu ardaygiiba helayaa?

Bedka Saddexagalka

Soo qaado waraaq leh qaab laydi ah, qalin iyo mastarad. Adiga oo adeegsanaya mastarad iyo qalin, u samee hal xagal gooye laydiga (waraaqda) Marka waxa kuu muuqaneysa in ay u qaybsameysa labo saddexagal. Ka kala goo (jar) laydiga (waraaqda) xagaigooyaha, labada saddexagal ee uu laydigu (waraaqdu) u qaybsamay is dul saar. Halkaa waxaa kaaga muuqanaya in labada saddexagal ay isku sargo'an yihiin. Taas oo ah in labada saddexagal bedkoodu uu isle'eg yahay. Taas oo macneheedu yahay labada saddexagal mid kasta bedkiisu waxa uu le'eg yahay barka (Nuska) bedka laydiga.



Haddii aad soo qaadato shaxanka labaad waxaa kuu muuqanaya:

- JX Waa salka saddexagalka iyo laydigaba
- TX Waa joogga saddexagalka iyo laydiguba

$$\therefore \text{BEDKA SADDEXAGALKA } TJX = \frac{1}{2} \text{ BEDKA LAYDIGA} = \frac{1}{2} (JX \cdot TX)$$

Markaa bedka saddexagalka = $\frac{1}{2}$ X sal X joog

Tusaale 1

Raadi bedka saddexagal jooggiisu yahay 16 sm salkiisuna yahay 8 sm.

Furfuris

Sal = 8 Sm
 Joog = 16 sm
 Bedka Δ ka = ?

Markaa

$$\begin{aligned} \text{Bedka } \Delta \text{ ka} &= \frac{1}{2} (J \times S) \\ &= \frac{1}{2} (16\text{sm} \times 8 \text{ sm}) \\ &= \frac{1}{2} (128 \text{ sm}^2) \\ &= 64 \text{ sm}^2 \end{aligned}$$

Tusaale 2

Raadi bedka saddexagalka jooggiisu yahay 14 sm, salkiisuna yahay 9sm

Furfuris

Sal = 9 sm
 Joog = 14 sm
 Bedka Δ ka = ?

Markaa

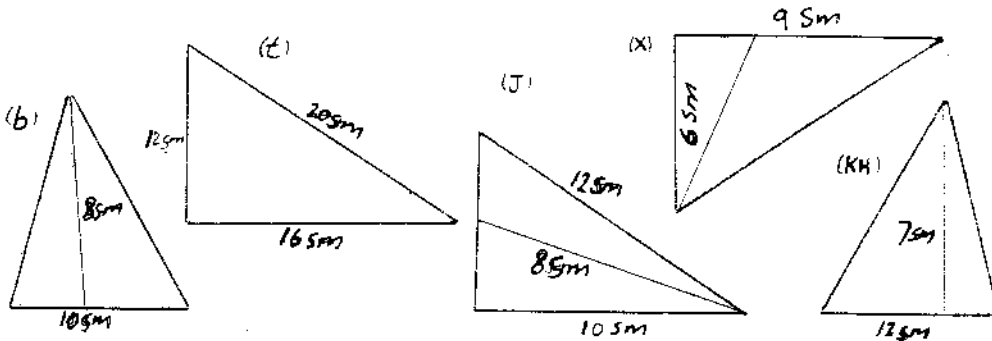
$$\begin{aligned} \text{Bedka } \Delta \text{ ka} &= \frac{1}{2} \times J \times S \\ &= \frac{1}{2} \times 14 \text{ sm} \times 9 \text{ sm} \\ &= 63 \text{ sm}^2 \end{aligned}$$

Layli

1. Sidee lagu helaa bedka saddexagal?
2. Raadi bedka saddexagallada leh joogaga iyo salalka soo socda.

- | | |
|-----------------|-----------------|
| b) 5 sm, 3 sm | x) 8 sm, 16 sm |
| t) 2.9 sm, 7 sm | kh) 9 sm, 16 sm |
| j) 6 sm, 2.5 sm | d) 14sm, 5 sm |

3. Soo saar bedka saddexagal kasta ee shaxannada soo socda.



Fogaan, Xawaare iyo Ammin

Socdaal marka la galo waxa maskaxdeenna ku soo dhaca waxyaabo gaar ah. Waxa markiiba innagu soo dhacaya inta ay jirto meesha la rabo in la gaaro, amminta lagu gaarayo waa intee iyo saacaddiiba inta la socon karayo. Socdaalka laga hadlayaa ma aha ka dadka oo qur ah, waxa loo jeedaa wax kasta oo socda sida dadka, xoolaha, baabuurta iyo wixii la mid ah.

Sida loo socdo deg-deg ama qunyar ha ahaatee waxa aynnu oran doonaa xawaare. Mar haddii waqtiga meel lagu gaarayo uu ku xiran yahay sida loo xawaareeyo iyo fogaanta la soconayo. Waxa la ogaaday in xawaaruhu uu yahay fogaanta oo loo qaybshay waqtiga.

Haddii fogaanta aan u qaadano (f) waqtigana (a), Xawaarahana (x) kolkaa

$$\begin{aligned} \text{Xawaare} &= \frac{\text{Fogaan}}{\text{ammin}} \\ x &= \frac{f}{a} \end{aligned}$$

$$\text{Fogaan} = x \ a$$

$$\text{Ammin} = \frac{f}{x}$$

Tusaale 1

Cabdi ayaa waxa uu u socday 4 saac inta u dhexeysa guriga iyo beertiisa, waxa ayna isu jiraan 24 kiilomitir. Waa immisa celceliska xawaarihiisu?

Furfuris

Fogaan (f) = 24 km, Amminta (a) = 4 Saac, Xawaaraha (x) = ?

$$x = \frac{f}{a} = \frac{24 \text{ km}}{4 \text{ Saac}} = 6 \text{ Km/Saac}$$

Tusaale 2

Gaari xawaarihiisa ahaa 240 Km/Saac ayaa jaray 960 Km. Immisa saac ayuu fogaantaas ku jaray?

Furfuris

$x = 240 \text{ km / saac}$

$f = 960 \text{ km}$

$$a = \frac{f}{x} = \frac{960 \text{ km}}{240 \text{ km / saac}} = 4 \text{ saac}$$

Tusaale 3

Tareen ayaa socday muddo 8 saac, ceceliska xawaarihiisuna waxa uu ahaa 114 km/saac. Raadi fogaanta uu jaray?

Furfuris

$a = 8 \text{ saac}$

$x = 114 \text{ km/saac}$

$f = ?$

$$f = a \times x = 8 \text{ saac} \times 114 \text{ km/saac} = 912 \text{ km}$$

Layli

1. Qor oo dhammeystir tusahan soo socda

	FOGAAN	AMMIN	XAWAARE
(b)	70 km	2 saac	-
(t)	-	5 saac	13km/saac
(j)	164 km	4 saac	-
(x)	-	6 saac	150km/saac
(kh)	360km	-	120km/saac

2. Haddii dayuurad 330 km ay ku duushey muddo 40 daqiiqo ah. Immisa ayaa uu ahaa xawaaraheeda km/saac ahaan?

3. Inta u dhexeysa 7:00 gd - 11 gd, gaari noociisu yahay TOYOTA ayaa socday fogaan ah 320 km. Immisa ayaa uu ahaa xawaaraha gaarigu?

4. Aadan ayaa 3 saacadood ku waday gaari 270 km, halka Cusmaan uu ku waday xawaare ah 90 km/saac. Labadooda midkee ayaa Xowli dheer ku socday?

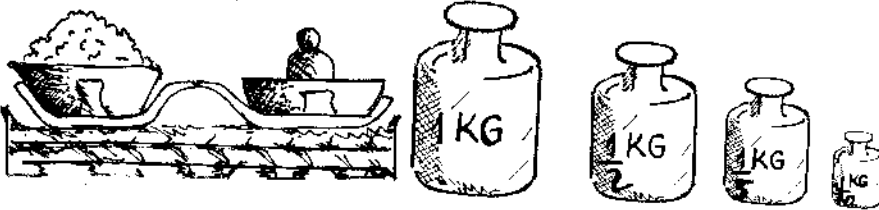
5. *Nin baa saacaddii socda 5 km, Immisa saacadood dabadeed ayuu gaarayaa meel jirta 30 km?*
6. *Baabuur ayaa ay ku qaadatay 3 saacadood in uu ku gaaro magaalo jirta 240 km. Xawaaraha baabuurka waa intee saacaddii?*
7. *Xawaare ah 80 km saacaddii, waa immisa mitir daqiiqaddii?*
8. *Faras baa magaalo jirta 50 km. Ku gaaray 2 saacadood. Faras kalena magaaladii ayuu ku gaaray $2 \frac{1}{2}$ saacadood. Labada faras xawaarahoodu intaa ayaa uu is dheer yahay?*
9. *Baabuur ayaa xawaarihiisu yahay 64 km saacaddii. 3 saacadood fogaanta uu soconayaa waa immisa?*

Culays: Kiilogaraam iyo garaam

Kiilogaraam waxa loo adeegsadaa in lagu miisaamo culayska walxaha aad u culus, sida kartoon baasto i.w.m.

Garaamna waxa loo adeegsadaa in lagu miisaamo culayska walxaha fudud, sida in yar oo cusbo ah i.w.m.

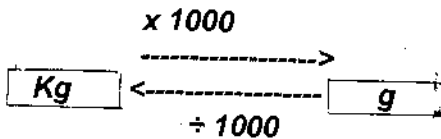
$$1000 \text{ garaam (g)} = 1 \text{ kiilogaram (kg)}$$



Isku beddelidda kiilogaraam iyo garaam

Marka kiilogaram loo beddelayo garaam, tirada kg ayaa waxa lagu dhufanayaa kun (1000).

Marka garaam loo beddelayo kiilogaram, tirada garaamka ayaa waxa loo qeybinayaa kun (1000). Fiiri shaxankan.



Tusaale 1

8000 garaam u beddel kiilogaraam

Furfuris

Waxa aynnu ognahay in $1000 \text{ g} = 1 \text{ kg}$

$$\begin{aligned} \text{Markaa, } 8000 \text{ g} &= \frac{8000}{1000} \text{ kg ama} \\ &= 8 \text{ kg} \end{aligned}$$

$$\begin{array}{r} 8 \text{ Kg} \\ 1000 \overline{) 8000} \\ \underline{8000} \\ 00 \end{array}$$

Tusaale 2

Immisa garaam baa ku jirta 3 Kg

Furfuris Waxa aynnu ognahay

in $1 \text{ Kg} = 1000 \text{ g}$

$$\begin{aligned} \text{Markaa, } 3 \text{ kg} &= 3 \times 1000 \text{ g} \\ &= 3000 \text{ g} \end{aligned}$$

Tusaale 3

6500 garaam u beddel kiilograamyo

Furfuris

$$\begin{aligned}
 & \cdot 1000g = kg \\
 \therefore 6500g &= \frac{6500}{1000} \\
 & \quad \text{-----} \\
 & \quad 6.5 \\
 & = \text{----- kg} \\
 & \quad 10 \\
 & = 6.5 \text{ kg}
 \end{aligned}$$

$$\begin{array}{r}
 \text{ama } \quad \quad \quad 6.5 \\
 \quad \quad \quad \boxed{1000} \quad \boxed{6500} \\
 \quad \quad \quad \text{-----} \\
 \quad \quad \quad -6000 \\
 \quad \quad \quad \text{-----} \\
 \quad \quad \quad 5000 \\
 \quad \quad \quad 5000 \\
 \quad \quad \quad \text{-----} \\
 \quad \quad \quad 00
 \end{array}$$

Tusaale 4

3
2 --- kg u beddel garaamyo
4

Furfuris

$$\begin{aligned}
 \cdot 1kg &= 1000g \\
 \therefore 2kg &= 2 \times 1000g \\
 &= 2000g \\
 \frac{3}{4} \text{ kg} &= \frac{3}{4} \times 1000 \\
 &= 750g \\
 \therefore 2 \frac{3}{4} \text{ kg} &= \left(2 + \frac{3}{4} \right) \text{ kg} \\
 &= (2000 + 750)g \\
 &= 2750g
 \end{aligned}$$

$$\begin{aligned}
 \text{ama } \quad \quad \quad \frac{3}{4} \text{ kg} &= 2 \frac{3}{4} \times 1000g \\
 &= \frac{11}{4} \times 1000g \\
 &= 11 \times 250g \\
 &= 2750g
 \end{aligned}$$

Tusaale 5

Caasho ayaa soo iibsatay 25 kartoon oo baasto ah, halkii kartoon waxa ku jira 9000 garaam oo baasto ah. Immisa kiilograam oo baasto ah ayaa ay soo iibsatay?

Furfuris

1 Kartoon culayskiisu waa 9000g
25 kartoon culayskoodu waa 25X9000g

$$\begin{aligned}
 \therefore (25 \times 9000)g &= 25 \times 9000 \\
 & \quad \quad \quad \text{----- kg} \\
 & \quad \quad \quad 1000 \\
 & = 225 \text{ kg}
 \end{aligned}$$

1000 g = 1Kg

Layli

I. Buuxi khaanadaha maran (bannaan)

- b) $340 \text{ g} = \boxed{} \text{ kg}$ t) $\boxed{} \text{ g} = 2 \frac{1}{2} \text{ kg}$ j) $8000 \text{ g} = \boxed{} \text{ kg}$
- x) $\boxed{} \text{ g} = 9020 \text{ g}$ kh) $4000 \text{ g} = \boxed{} \text{ kg}$ d) $749 = \boxed{} \text{ kg}$

II. Furfur mas'alooyinka soo socda

- b) Maxamuud ayaa waxa uu soo iibsaday 7 Loor oo masaggo ah, halkii loorna culeyskiisu waa 50,000g. Guud ahaan masaggada uu Maxamuud soo iibsadey culeyskeedu waa immisa kiilogaraam?
- t) Nuur culeyskiisu waa 70 kg, halka Cabdi culeyskiisu uu yahay 80 kg. Laba wiil oo ay dhaleenna culeyskoodu waa 7.5 kg iyo $12\frac{1}{2} \text{ kg}$ sida ay u kala horreeyaan. Guud ahaan dadkaasi culeyskoodu waa immisa garaam?

III. Mid kasta oo kuwa soo socda ka mid ah u beddel kg.

- b) 1800g t) 2050g j) 400g x) 40g kh) 7001g
 d) 2310g r) 4000g s) 8500g sh) 650g dh) 200g

IV. Mid kasta oo kuwa soo socda ka mid ah u beddel g.

- b) 3 kg t) $2\frac{1}{2} \text{ kg}$ j) $5 \frac{1}{4} \text{ kg}$ x) $9 \frac{3}{4} \text{ kg}$ kh) $1 \frac{5}{7} \text{ kg}$
- d) 9.6 kg r) $8 \frac{5}{6} \text{ kg}$ s) 5.5 kg sh) 2.9 kg dh) 2.25 kg

Isugeynta halbeegyada culayska

Horey waxa aan u soo baranay isku beddelidda kiilogaraam iyo garaam, casharkanina waxa aan ku baraneynaa isugenta halbeegyada culeyska.

Bal u fiirso tusaalahan:

Tusaale 1

Isugee 6kg 259g, 8kg 740g iyo 2kg 596g

Furfuris

kg	g
6	250
8	740
+ 2	596

16	1586
16+1	1000+586
17	586

Haddaba si la isugu geeyo halbeegyada culayska waa in:-

i) Marka hore la isku hoos dhigaa halbeegyada isu'eg.

ii) Isugeynta laga bilaabaa halbeegga ugu yar (g).

iii) 1000 kii garaam loo beddelo hal kiilogaraam marka wadarta garaamyada ay ka bataan 1000 garaam, loona geeyo kiilogaraamyada.

Tusaale 2 Raadi wadarta

b) 3 kg 500g+12kg 27g+26Kg 480g t) 10kg 652g+4kg 269+15kg 480g

Furfuris

b) kg	g
3	500
12	27
+26	480

41	1007
41+1	1000+7
42	7

t) kg	g
10	652
4	269
+ 15	480

29	1401
29+1	1000+401
30	401

Tusaale 3

Cudbi ayaa waxa ay soo iibsatay 3kg 576g oo digir ah, 2kg 258g oo hilib ah iyo 1kg 653g oo bataati ah. Haddaba guud ahaan waa immisa culeyska cuntada ay soo iibsatay Cudbi?

Furfuris

kg	g
3	576
2	258
+ 1	653

6	1487
6+1 ←	(1000)+487
7	487

Layli

I. Isugee halbeegyadan

- b) 7kg 120g + 3kg 240g + 5kg 380g
- t) 5kg 387g + 2kg 150g + 9kg 750g
- j) 4kg 470g + 3kg 280g + 10kg 630g
- x) 12kg 650g + 24kg 85g + 75kg 785g
- kh) 124kg 44g + 96kg 45g + 4kg 896g
- d) 10kg 75g + 4kg 750g + 17kg 975g
- r) 9kg 200g + 19kg 845g + 37kg 440g
- s) 4kg 350g + 3kg 800g + 7kg 75g

II. Furfur mas'alooyinkan

- b) Nin culeyskiisu yahay 85Kg 450g ayaa waxa uu fuulay faras culeyskiisu yahay 203Kg 875g, culeyska ninka iyo kan faraska marka la isku daro waa immisa?
- t) 1970 kii Xuseen culeyskiisu waxa uu ahaa 67kg 320g, 1980 kii waxa uu noqday 75kg 205g, 1990 kiina waxa uu ahaa 87kg 720g. Saddexda xilli culeyska Xuseen marka la isugeeyo waa immisa?
- j) Saddex naagood ayaa waxa la siiyay digir. Faadumo waxa ay heshay 25kg 100g, Asli iyo Seynab waxa ay kala heleen 68kg 750g iyo 79kg 250g sida ay u kala horreeyaan. Guud ahaan immisa ayuu ahaa culeyska digirta la siiyay?

- x) Wadarta $\frac{1}{2}$ kg iyo $\frac{1}{4}$ kg waa immisa garaam?

Kalagoynta halbeegyada culeyska

Waxa aan casharkii hore ku baranay isugeynta halbeegyada culeyska, casharkanna waxa aan ku baraneynaa kalagoyntooda. Bal u fiirso tusaalahan:

Tusaale 1 Kalagoo

9kg 596g iyo 6kg 826g

Furfuris

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 9 \quad 596 \\
 - 6 \quad 826 \\
 \hline
 2 \quad 770
 \end{array}$$

Marka la kala goynaayo halbeegyada culayska waa in:

- La isku hoos dhigaa halbeegyada isu'eg.
- Kala goynta laga bilaabaa halbeegga ugu yar (g).
- La soo amaahdo 1 kiilogaraam, loona beddelo garaam isla markaana loo geeyo garaamyada, marka aaney suuragal ahayn in la kala gooyo garaamyada.

Tusaale 2 Kalagoo

b) 65kg 385g iyo 12kg 219g

t) 365kg 325g iyo 90kg 703g

Furfuris

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 65 \quad 385 \\
 - 12 \quad 219 \\
 \hline
 53 \quad 166
 \end{array}$$

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 365 \quad 325 \\
 - 90 \quad 703 \\
 \hline
 274 \quad 622
 \end{array}$$

Tusaale 3

Nin kawaanle ah ayaa haystay 14kg 650g oo hilib ah, waxa uu iska iibiyay 9kg 225g. Raadi culeyska hilibka u haray?

Furfuris

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 14 \quad 650 \\
 - 9 \quad 225 \\
 \hline
 5 \quad 425
 \end{array}$$

Layli

I. Kalagoo halbeegyadan hoose

b) 205kg 315g	iyo	122kg 444g
t) 10kg 470g	iyo	5kg 581g
j) 75kg 342g	iyo	19kg 193g
x) 5kg 650g	iyo	4kg 925g
kh) 8kg 560g	iyo	2kg 925g
d) 15kg 800g	iyo	7kg 350g
r) 19kg 35g	iyo	7kg 28g
s) 134kg 865g	iyo	63kg 975g
sh) 241kg 345g	iyo	80kg 675g

II) Furfur mas 'alooyinka soo socda

b) Jaamac ayaa siday digaagad culeyskeedu yahay 2850g, wiilkiisana waxa

1

uu siday mid kale oo culeyskeedu yahay 2--- kg, labadooda

4

midkee siday digaagadda ugu culus, immisa garaam bay ka cusleyd?

t) Gaari ayaa waxa uu qaadi karaa 56kg 780g. Waxa la saaray rar 38kg 986g ah. Soo saar culeyska rarka u haray?

j) Ruqiya ayaa soo iibsatay bur miisaankiisu yahay 35kg 253g. Marka ay soo qaadeysay ayaa uu ka daatay waxaana u soo haray 21kg 965g. Soo saar miisaanka burka ka daatay?

x) Saddex sano ka hor Cabdi ayaa culeyskiisu waxa uu ahaa 68kg, haddana culeyskiisu waa 70kg 705g. Waa immisa faraqa u dhexeeya labadiisa culays?

kh) Dibi culeyskiisu yahay 320kg 405g ayaa ceel biyo ka soo cabbay, marka uu biyaha cabbayna culayskiisu waxa uu noqday 335kg 217g. Waa immisa faraqa u dhexeeya?

Isku dhufashada halbeegyada culeyska iyo tiro

Marka la isku dhufanaayo tiro iyo halbeegyada culeyska waa in:

- i) Marka hore tirada lagu dhuffo garaamyada.
- ii) Garaamyada loo beddelaa kiilogaraam, marka ay ka badan yihiin 1000 garaam.
- iii) Tirada lagu dhuftaa kiilogaraamyada ka dibna lagu daraa kiilgaraamyada tallaabada 2aad laga helay.

Bal u fiirso tusaalooyinkan

Tusaale 1

Isku dhufo 35kg 643g iyo 3

Furfuris

kg	g
35	643
X	3
<div style="display: flex; justify-content: space-between; width: 100%;"> 105 1929 </div>	
<div style="display: flex; justify-content: space-between; width: 100%;"> 105+1 ← (1000)+929 </div>	
106	929

Tusaale 2

Isku dhufo 12kg 458g iyo 6

Furfuris

kg	g
12	458
	6
<div style="display: flex; justify-content: space-between; width: 100%;"> 72 2748 </div>	
<div style="display: flex; justify-content: space-between; width: 100%;"> 72+2 ← (2000)+748 </div>	
74	748

Tusaale 3

Haddii gaari uu soo qaaday 17 qof oo rakaab ah, halkii rakaabna uu miisaankiisu yahay 56kg 254g. Waa immisa wadarta miisaankooda?

Furfuris

Kg	g
56	254
x	17
<div style="display: flex; justify-content: space-between; width: 100%;"> 952 4318 </div>	
<div style="display: flex; justify-content: space-between; width: 100%;"> 952 + 4 ← (4000) + 318 </div>	
956	318

Miisaanka rakaabka oo idil wa 957kg 318g

Layli

I. Ka shaqee layliyada soo socda

- b) 125kg 366g X 9 t) 13kg 250g X 8 j) 95kg 315g X 10
 x) 30kg 535g X 4 kh) 328kg 621g X 7 d) 85kg 265g X 3
 r) 72kg 620g X 6 s) 216kg 100g X 20 sh) 251kg 563g X 21
 dh) 68kg 512g X 14

II. Furfur mas'alooyinka soo socda

b) Makiinad cajiin ayaa daqiiqaddii shiidi karta badar culayskiisu yahay 13Kg 350g. Immisa ayaa ay shiidi kartaa 9 daqiiqo?

t) 7 neef oo ari ah ayaa midkiiba culayskiisu yahay 35Kg 295g. Waa immisa culayska ariga oo dhan?

Isu qeybinta halbeegyada culayska iyo tiro

Casharkii hore waxa aan ku soo baranay iskudhufashada halbeegyada culayska iyo tiro. Casharkanna waxa aan ku baran doonnaa isuqeybinta halbeegyada culayska iyo tiro. Bal u fiirso tallaabooyinka soo socda oo kuu tilmaamaya sida la isugu qaybin karo halbeegyada culayska iyo tiro:

- Isu qaybinta ka bilow kiilogaraamyada.
- U beddel haraaga garaamyo
- Ku dar haraaga oo garaam ah garaamyada.
- Garaamyada u qaybi tirada.

Tusaale 1

49Kg 230g u qeybi 5

Furfuris	9kg	846g
5	49Kg	230g
	-45Kg	4000g
	4Kg	4230g
		- 40

		23
		- 20

		30
		- 30

		00

Tusaale 2

459kg 675g u qaybi 9

	51kg	75g
9	459kg	675g
	45	- 63
	09	45
		- 45

		00
		00

Layli

I. Isu qaybi mid kasta oo kuwa soo socda ka mid ah

- b) 414kg 630g u qaybi 18
- t) 459kg 200g " 41
- j) 988g " 13
- x) 359kg 520g " 21
- kh) 734kg 652g " 12
- d) 460kg 674g " 9
- r) 829kg 260g " 36
- s) 309kg 938g " 17

II. Furfur mas'alooyinka soo socda

- b) Saddex wiil oo culayskoodu isle'eg yahay ayaa miisaanka culayskoodu yahay 162Kg 624g. Mid waliba miisaanka culayskiisa waa immisa?
- t) Jiiragaan ay ku jirto saliid culayskeedu yahay 39Kg 246g ayaa waxa si isle'eg loogu shubay 6 caag. Waa immisa culayska saliidda halkii caag?
- j) Hay'ad samafal ayaa 7 naagood si isle'eg ugu qaybisay bur culayskiisu yahay 349Kg 300g. Waa immisa culayska burka ay naag waliba heshey?

Wax soo gadasho



Layli

Adiga oo isticmaalaya tusaha sicirka hoose ka jawaab mas'alooyinka ka hooseeya tusaha

Alaabta	Qiimaha
1kg oo Sonkor ah	4,800, Sh. So
1kg oo Hilib ah	6,000, Sh. So
1kg oo Bariis ah	4,000, Sh. So
1kg oo Baasto ah	6,000, Sh. So
1kg oo Basal ah	4,000 Sh. So
1kg oo Bur ah	4,000 Sh. So
1kg oo Caleen	6,000, Sh. So
1kg oo Saliid ah	3,200, Sh. So

1. Axmed waxa uu soo iibsaday 8kg oo hilib ah, 5Kg oo sonkor ah, 6kg oo bariis ah iyo 2kg oo saliid ah. Immisa shilin ayuu qarash gareeyey?
2. Cusmaan ayaa dukaan ka iibsaday 5kg oo caleen ah, 3Kg oo basal ah, 5Kg oo saliid ah. Haddii Cusmaan uu u dhiibo dukaanlaha 100,000 Sh. So. Immisa lacag ayaa Cusmaan u soo noqonaysa?
3. Haddii Faadumo ay ka soo iibsaday suuqa 2kg oo hilib ah, 5kg oo baasto ah iyo $\frac{1}{2}$ kg oo basal ah, Maryana ay soo iibsaday 3kg oo hilib ah, 4kg oo baasto ah iyo --- Kg oo basal ah.
 - a) Yaa qarash badan Faadumo iyo Maryan?
 - b) Soo saar faraqa lacagahooda?

4. Had iyo jeer Udugow waxa ay ka soo adeegtaa dukaan. Dukaanlaha waxa uu u qoraa rasiid oo uu ku buuxinayo shey walba inta ay ka bixisay. Sheyga ugu horreeya waa lagu buuxiy-ay ee buuxi rasiidka inta kale.

Alaabta		Sh.So.
$\frac{1}{4}$ kg oo basal	$\frac{1}{4} \times 4000$	1000
1 $\frac{1}{2}$ kg oo sonkor	_____	_____
4 kg oo bur ah	_____	_____
$\frac{1}{2}$ kg oo caleen	_____	_____
3 kg oo hilib	_____	_____
Wadarta =		_____

5. Shukri ayaa soo iibsatay alaabta soo socota:
3kg oo saliid ah, 2kg oo caleen ah, 5kg oo hilib ah, 2 $\frac{1}{2}$ kg oo baasto ah iyo 7kg oo sonkor ah. Haddaba u diyaari Shukri rasiid?
6. Khadra ayaa waxa ay soo iibsatay 2kg oo bariis ah, 3kg oo hilib ah iyo 2 $\frac{1}{2}$ oo baasto ah. Haddaba u diyaari khadro rasiid?
7. Xaawo ayaa leh maqaayad waxa ay maalin kasta soo iibsataa 4kg oo baasto ah, 1kg oo saliid ah, $\frac{1}{2}$ kg oo basal ah iyo 2kg oo sonkor ah. Soo saar lacagta ay Xaawo bixisay?
8. Cabdi ayaa waxa uu soo iibsaday 3kg oo caleen ah, 12kg oo sonkor ah si uu u sii iibiyo ugana helo faa'iido.
b) Soo saar lacagta uu Cabdi bixiyey?
t) Immisa lacag ayuu bixinayaa laba maalmood?
j) Immisa ayuu bixinayaa toddobaadkii?

Faa'iido iyo Khasaaraha

Sida ayannu la wada socono dadka leh warshadaha, beeraleyda, becmushtarka, dukaanleyda iyo qof allaale qofkii wax soo iibsada ee sii iibiya waxa uu goor kasta ku dadaalaa in uu ka helo macaash ama faa'iido.

Hadaba:

Faa'iido = Qiimaha iska iibinta - Qiimaha soo gadashada.

Tusaale 1

Faadumo waxa ay soo iibsatay Ari. Waxaa ay soo siisatay 36200 Sh. So. Muddo ka dib ayaa ay iska iibisay. Waxaana lagaga iibsaday 42600 Sh. So. Soo saar macaashkeeda?

Furfuris

Macaash = Qiimaha iska iibinta - Qiimaha soo gadashada
= 42600 - 36200 = 6400 Sh. So.

Waxa ay faadumo macaashtay 6400 Sh. So.

Tusaale 2

Dukaanle ayaa toban shaar ku soo gatay 120000 Sh. So. ka dibna wuxuu ku iibiyay 96300 Sh. So. Immisa ayuu khasaaray dukaanluhu?

Khasaaraha = Qiimaha soo gadashada - Qiimaha iska iibinta

Furfuris

Qiimaha soo gadashada = 120000 Sh. So
 Qiimaha iska iibinta = 96300 Sh. So
 Haddaba khasaaraha = Qiimaha soo gadashada - Qiimaha iska iibinta
 = 120000 - 96300 = 23700 Sh. So

Layli

1. Cabdi waxa uu ku soo gatay qudaar lacag dhan 15000 Sh.So, ka dibna waxa uu ku iibiyay 28800 Sh.So. Soo saar macaashkiisa?
2. Sahro ayaa soo gadatay 2 digaag oo qiimahoodu yahay 35000 Sh.So, haddii ay ku iibisay 23500 Sh.So. Ma macaashtay mise way khasaartay? Soona saar midka uu yahay?
3. Cali waxa uu kabo ku soo gatay 13500 Sh.So ka dibna waa uu iska iibiyay asagoo helay Macaash 350 Sh.So ah. Soo saar qiimaha uu ku iibiyay?
4. Labo miis ayaa lagu soo iibiyay mid kasta 4500 Sh.So. Ka dibna waxaa lagu iibshay mid kiiba 6400 Sh.So. Soo saar macaashka mid kasta laga helay?
5. Bas ayaa lagu soo iibiyey 185200 Sh.So. Waxaana lagu iibiyay 12300 Sh.So. Soo saar khasaaraha?
6. Dukaanle ayaa shan shaati ku soo gaday 45400 Sh.So. ka dib waxa uu ogaaday in uu ku khasaaray shaati kasta 500 Sh.So. Immisa ayaa uu ku gaday shaati kasta?

Boqolkii inta faa'iido ah iyo inta Khasaaro ah

Waxa aynnu ognahay dadka leh warshadaha ama qof waliba oo becmushtar ah in ay ku xisaabtamaan boqolkii inta faa'iido ah ee kujiri karta ama khasaare waxyaabaha ay iibinayaan ama ay warshaduhu soo saaraan. Haddaba fiiri qeexda ah

$$\text{Boqolkii inta faa'iido} = \frac{\text{Faa'iidada}}{\text{Qiimaha soo gadashada}} \times 100$$

Sidoo kale eeg qeexda ah.

$$\text{Boqolkii inta khasaare ah} = \frac{\text{Khasaare}}{\text{Qiimaha soo gadashada}} \times 100$$

Tusaale 1.

Haddii qiimaha buug uu yahay 48000 Sh.So, boqolkiina inta faa'iido ay tahay 15%. Soo saar faa'iidada iyo qiimaha iska iibinta.

Furfuris

Qiimaha soo gadashada = 48000 Sh.So

Boqolkii inta faa'iidada = 15%

15

Sidaa awgeed

15

Faa'iido = ----- x 48000 = 7200 Sh. So.

100

Qiimaha iska iibinta = Qiimaha soo gadashada + faa'iido

= 48000 + 7200 = 55200 Sh. So.

Tusaale 2.

Maano ayaa ku soo gadatay fuusto shidaal ah 462300 Sh.So, ka dibna waxa laga siistay 524200 Sh.So. Boqolkii immisa ayaa ay faa'iidday?

Furfuris

Qiimaha soo gadashada = 462300 Sh.So

Qiimaha iska iibinta = 524200 Sh.So.

Faa'iido = Qiimaha iska iibinta - Qiimaha soo gadashada

= 524200 - 462300 = 61900 sh.so

Boqolkiiba inta faa'iidada = $\frac{\text{Faa'iidada}}{\text{Qiimaha soo gadashada}} \times 100$

= $\frac{61900}{462300} \times 100 = 13.4$

13.4

Maano waxa ay faa'iidday 13.4%

Tusaale 3

Darawal ayaa gaari ku soo gatay 27000 Sh.So, muddo ka dib gaarigii waxa uu iskaga iibiyay 26200 Sh.So. Soo saar boqolkiiba inta uu khasaaray?

$$\text{Khasaare} = \text{Qiimaha soo gadashada} - \text{Qiimaha iska iibinta}$$

$$27000 - 26200 = 800$$

$$\text{Boqolkii inta khasaare ah} = \frac{\text{Khasaare}}{\text{Qiimaha soo gadashada}} \times 100$$

$$= \frac{800}{27000} \times 100$$

$$= 2.96\% \text{ Boqolkiiba waxa uu khasaaray}$$

$$2.96\%$$

Layli

1. *Nin geddiskey ah ayaa xayn ari ah ku soo iibsadey 180.000 Sh.So in muddo ah ka dib wuxuu iskaga iibiyay 238.500 Sh.So. Xisaabi boqolkiiba inta uu faa'iiday?*
2. *Xaliimo ayaa waxa ay soo iibsaty 900 oo Ukun ah. Middiina waxa ay ka soo bixisay 9000 Sh.So, 30 Ukun ayaa jajabay, inta hartayna middiiba waxa ay isaga iibisay 9600 Sh.So. Xisaabi inta boqolkiiba ay faa'iidday ama Khasaartay?*
3. *Iskaashato ayaa soo iibsaty 250 sanduuq oo daawo ah sanduqiina waxa ay ku soo iibisay 12000 sh.so. In yar ka dib waxa ay ku wareejisay farmashiye sanduuqiina waxa ay ka siisay 11500 sh.so. Haddaba xisaabi inta boqolkiiba ay iskaashatadu faa'iidday ama ay khasaartay?*
4. *Nin dukaanle ah ayaa waxa uu helay faa'iido dhan 15% markii laga iibsaday 2 jawaan oo bariis ah lagana siistay lacag dhan 136000. Soo saar qiimaha uu ku soo iibsaday labada jawaan oo bariiska ah?*
5. *Nin xoolo dhaqato ah ayaa waxa uu sac irmaan ah ku soo iibsaday 860,000 Sh.So Muddo ka dib waxa lagaga iibsaday 960,000. Soo saar boqolkiiba inta uu faa'iiday?*

Saami iyo Saamigal : Saami



Sawirka sare waxa inooga muuqda in halka miis uu ku hagaagayo saddex arday, haddaba marka aan is barbardhigno tirada miisaska iyo tirada ardayda waxa aan oran karnaa:

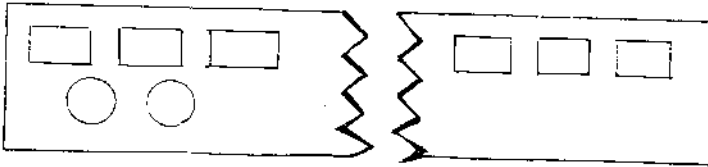
Saamiga tirada miisaska iyo tirada ardayda waa 1 ka 3 oo loo qoro 1:3

1
ama ---
3

Saamiga tirada ardayda iyo tirada miisaska waa 3 ka 1 oo loo qoro 3:1

3
ama ---
1

Tusaale 1



U fiirso sawirka (2) ka dibna dhammeystir:

b) Saamiga tirada laydiyada iyo tirada gooboyinka ee urur kasta

waa ___ : ___ oo loo akhriyo ___ ka ___ ama ___

(t) Saamiga tirada gooboyinka iyo tirada laydiyada ee urur kasta

waa (___ : ___ oo loo akhriyo ___ ka ___) ama ___

Tusaale 2

Sawir 3

U fiirso sawirka (3) ka dibna qor saamiyada soo socda

- b) Saamiga qaybaha xardhan ee laydiga iyo qaybaha laydiga oo idil.*
- t) Saamiga qaybaha xardhan ee laydiga iyo qaybaha aan xardhanayn.*

Furfuris

- b) Saamiga qaybaha xardhan ee laydiga iyo qaybaha laydiga oo idil waa 5 ka 15 oo loo qoro 5:15 ama 5*

$$\frac{5}{15}$$

- t) Saamiga qaybaha xardhan ee laydiga iyo qaybaha aan xardhanayn*

waa 5 ka 10 ama 1 ka 2 oo loo qoro 5:10 = $\frac{5}{10}$ ama 1:2 = $\frac{1}{2}$

Saamiga iyo Halbeegyada

Saamiga labo walxood oo isku jaad ah waa in ay isku halbeeg yihiin, haddii aysan isku halbeeg ahayn waa in loo rogaa isku halbeeg.

Tusaale 1

Soo saar saamiga ballaca iyo dhererka laydiga dhererkiisu yahay 60 sm, ballaciisuna yahay 0.4 m:

Furfuris

Si loo soo saaro saamiga ballaca iyo dhererka marka hore waa in aan ka dhigno isku halbeeg.

$$\begin{aligned} \text{ballac} &= 0.4\text{m} & \text{dherer} &= 60\text{sm} \\ 0.4\text{ m} &= 0.4 \times 100\text{ sm} & &= 40\text{ sm} \end{aligned}$$

Saamiga ballaca iyo dhererka laydigu waa

$$40:60 \text{ ama } \frac{40}{60} = \frac{4}{6} = \frac{2}{3}$$

Tusaale 2

Culeyska Axmed iyo Faadumo waa 6Kg iyo 4000g sida ay u kala horeeyaan. U qor saamiga culeyska Axmed iyo culeyska Faadumo sida ugu fudud ?

Furfuris

Marka hore culeysyadu waa in ay isku halbeeg noqdaan

$$4000g = \frac{4000 \text{ kg}}{1000} = 4 \text{ kg}$$

Saamiga culeyska Axmed iyo kan Faadumo waa $4:6 = \frac{4}{6} = \frac{2}{3} = 2:3$

Tusaale 3

U qor saamiyada soo socda habka ugu fudud

b) 5:10

t) 2.5:4

j) 80:120

x) $4\frac{1}{2}:3$

Furfuris

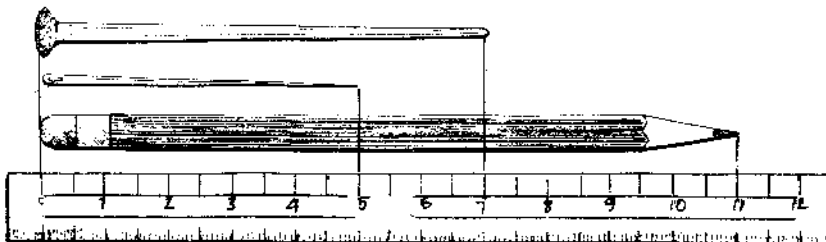
$$b) 5:10 = \frac{5}{10} = \frac{1}{2} \text{ ama } 1:2$$

$$t) 2.5:4 = \frac{2.5}{4} = \frac{25}{40} = \frac{5}{8}$$

$$j) 80:120 = \frac{80}{120} = \frac{2}{3}$$

$$x) 4\frac{1}{2}:3 = \frac{9}{2} \div 3 = \frac{9}{2} \times \frac{1}{3} = \frac{3}{2}$$

Layli



I. Fiiri sawirka 4aad, soona saar saamiga

- | | | |
|---------------------|---|-------------------|
| 1) Dhererka Qalinka | : | Dhererka Cirbadda |
| 2) " Musmaarka | : | " Qalinka |
| 3) " Qalinka | : | " Musmaarka |
| 4) " Musmaarka | : | " Cirbadda |
| 5) " Cirbadda | : | " Qalinka |

II. Fududee saamiyada soo socda

- | | |
|---------------------------|---------------------------|
| 1) 35m : 25m | 5) 425m : 1Km |
| 2) 480 Saac : 12 Maalmood | 6) 216 Sm : 1.68 m |
| 3) 2 Saac : 100 Daqiiqo | 7) 4 Maalin : 2 toddobaad |
| 4) 1Kg : 1000g | |

III. U qor saamiyada soo socda

- | | |
|----------------------|------------|
| 1) 3:1.5 | 2) 2.7:0.9 |
| 3) 3
3 ---:5
4 | 4) 1.25:5 |
| 5) 3000: 2500 | 6) 6:4½ |

IV. Laydi ayaa dhererkiisu yahay 124 sm, ballaciisu yahay 64 sm. Soo saar saamiga:

- 1) Ballaca laydiga iyo dhererkiisa.
- 2) Dhererka laydiga iyo ballaca.

Astaamaha Saamiga

Casharkii hore waxa aan ku soo baranay saamiga laba tiro. Casharkanna waxa aan ku baran doonnaa astaamaha saamiga. Sida aan horey u soo aragnay in saami uu yahay jajab, marka saamiga waxa uu u hoggaansamayaa astaamaha gaarka u ah jajabka.

Haddaba, saamigu waxa uu leeyahay astaamahan:

- 1) Labo tiro oo kasta waxa ay sameyn karaan saami laakiin tirada dambe waa in aysan noqon eber.
- 2) Saami isma beddelo haddii tiro aan eber ahayn lagu dhufto taas oo ah haddii aan haysano saamiga b:t markaa b:t =

$$\begin{array}{c}
 jb:jt \text{ ama } b \quad jb \\
 \text{----} = \text{----} \\
 t \quad jt
 \end{array}$$

Tusaale

Saamiga

$$3:5 = 6:10 \text{ ama } \frac{3}{5} = \frac{2 \times 3}{2 \times 5} = \frac{6}{10}$$

3) Saami isma beddelo haddii tiro aan eber ahayn loo qaybiyo taas oo ah, haddii aan haysano saamiga

$$b:t \text{ ama } \frac{b}{t} \text{ markaa } b:t = \frac{b}{j} : \frac{t}{j} \text{ ama } \frac{b}{t} = \frac{\frac{b}{j}}{\frac{t}{j}}$$

Tusaale

Saamiga

$$20:15 = \frac{20}{5} : \frac{15}{5} = 4:3$$

4) Haddii saami lagu dhufto tirada dambe ee saamiga. Waxa aad helaysa tirada hore ee saamiga. Taas oo ah haddii aan haysano a:b

$$\text{Marka } \frac{a}{b} \times b = a \text{ (oo ah tirada hore ee saamiga)}$$

Tusaale

$$2:7 = \frac{2}{7} \text{ marka } \frac{2}{7} \times 7 = 2$$

$$3:8 = \frac{3}{8} \text{ marka } \frac{3}{8} \times 8 = 3$$

Saamigal

Inta aynaan ka hadlin saamigal, marka hore aan eegno is barbar dhigidda labo saami, taas oo aan ku ogaaneyno labada saami midka weyn iyo kan yar.

Marka aan rabno in aan is barbardhigno laba saami waa in marka hore aan u beddelnaa qaab jajab ka dibna mideynaa hooseyeyaasha jajabka.

Tusaale 1

Is barbardhig saamiyada 3:5 iyo 4:7

Furfuris

U beddel saamiyada qaab jajab

$$3:5 = \frac{3}{5} \qquad 4:7 = \frac{4}{7}$$

Hooseeyeyaasha jajabka $\frac{3}{5}$ iyo $\frac{4}{7}$ mideyntooda micnaheedu waxa

uu yahay Raadinta dh.y.w 5 iyo 7 waana 35 markaa

$$\frac{3}{5} = \frac{21}{35} \qquad \frac{4}{7} = \frac{20}{35}$$

Haddaba $\frac{21}{35} > \frac{20}{35}$ Sidaas awgeed $3:5 \neq 4:7$

Tusaale 2

Is barbardhig saamiyada 2:5 iyo 6:15

Furfuris

$$2:5 = \frac{2}{5} \qquad 6:15 = \frac{6}{15}$$

Haddaba

$$\frac{2}{5} = \frac{6}{15} \qquad \frac{6}{15} = \frac{6}{15}$$

Markaa

$$\frac{2}{5} = \frac{6}{15}$$

Saamiyada tusaalaha 1aad oo ah $\frac{3}{4}$ iyo $\frac{4}{7}$ isma le'eka laakiin saamiyada

tusaalaha 2aad oo ah $\frac{2}{5}$ iyo $\frac{6}{15}$ waa isle'eg yihiin, sidaa awgeed waxa la yiraahdaa saamigal.

Saamigalku waa saamiyo isle'eg

Sida

$$2:5 = 10:25$$

(Tirooyinka 2,5,10,25 waxaa la yiraa tirooyin isu saamigal ah)

2,25 waxa la yiraahdaa cirifyada saamigalka.

5,10 waxa la yiraahdaa tirosinnada

saamigalka 25 waxa la yiraahdaa saamigalka afraad.

Guud ahaan

$$\frac{b}{t} = \frac{m}{n}$$

Haddii $\frac{b}{t} = \frac{m}{n}$ ama $b:t = m:n$, markaa b,t,m,n waxa la yiraahdaa waa

isu saamigal. Weliba b,n waxa la yiraahdaa cirifyada saamigalka t,m waxa la yiraadaa tirosinnada saamigalka. n waxa la yiraadaa saamigalka afraad.

Astaamaha Saamigalka

Saamigal kasta, taranka tirosinnadiisa waxa ay le'eg tahay taranka cirifyadiisa, labada taranna waxa la yiraahdaa taran isweydaar.

Bal u fiirso

$$1) \frac{5}{8} = \frac{10}{16}, \quad 5 \times 16 = 80 \\ 8 \times 10 = 80$$

$$2) \frac{6}{9} = \frac{2}{3}, \quad 6 \times 3 = 18 \\ 9 \times 2 = 18$$

Taran isweydaar waa hab lagu hubin karo in labada saami ay yihiin saamigal

Tusaale 1

$$\text{Hubin labada saami } \frac{7}{0.971} \text{ iyo } \frac{5}{0.565} \text{ ay yihiin saamigal}$$

Furfuris

Taranka is-weydaarku waa

$$5 \times 0.971 = 4.855$$

$$7 \times 0.565 = 3.955$$

Labada taran-isweydaar isma le'eka, markaa saamiyadu ma aha saamigal

Tusaale 2

Raadi haddii :4 = 3:5

$$\frac{\text{input}}{4} = \frac{6}{8}$$

$$\text{input} = 4 \times \frac{6}{8}$$

$$\text{input} = 4 \times \frac{6}{8}$$

$$\text{input} \times 8 = 4 \times 6$$

$$\text{input} = \frac{4 \times 6}{8} = \frac{24}{8} = 3$$

Tusaale 3

Raadi haddii 2,3,6, ay isu saamigal yihiin

Furfuris

$$\frac{2}{3} = \frac{6}{\square}$$

$$3 \times 6 = 2 \times \square$$

$$\square = \frac{3 \times 6}{2} = \frac{18}{2} = 9$$

$$\square = 9$$

Layli

I. Tirooyinkan kuweebaa saamigal ah:

b) 3,4,9,12

t) 3,4,6,10

j) 3,4,6,8

x) 12,6,4,2

kh) 1,5,7,35

d) 4,7,16,49

r) 45,15,30,3

II. Soo saar haddii

$$\square : 4 = 9 : 2$$

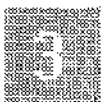
$$6 : \square = 22 : 37$$

$$5 : 4 = \square : 24$$

$$9 : 8 = \square : 16$$

$$116 : \square = 19 : 5$$

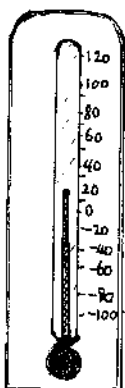
$$230 : 322 = k : 12$$



Abyooneyaal

Waa maxay Abyoone?

Hore waxa aan u soo baranay tirooyinka idil. Cutubkan waxa aan ku baran doonnaa tirooyinka lagu magacaabo Abyooneyaal.



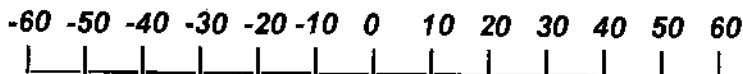
U fiirso kul-beeggaan

Kulbeeggan ku sawiran dhinaca bidix waxa la adeegsaday laba goor oo kala duwan, waxaana loo isticmaalay in lagu ogaado heerkulka laba walxood sida uu u kala duwanaa karo. Marka walaxda koowaad heerkulkeeda la cabbiray kul-beegga waxa uu tilmaamay 20° oo eber ka sarraysa loona qori karo ($+20^{\circ}$). Markii walaxda labaad heerkulkeeda la cabbirayna waxa uu noqday (20°) eber ka hooseysa loona qori karo (-20°)

Haddaba:

Haddii kul-beegaha aan uga fekerno xarriiq tiro ahaan.

Waxa aan heleynaa xarriiqda tiro ee hoose:

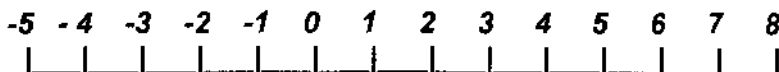


Tirooyinka midig ka xiga eber waa tirooyin togan kuwa bidix ka xigana waa tirooyin taban eber ma aha tiro togan iyo mid taban toona.

Tirooyinka togan, kuwa taban iyo eber waxa lagu magacaabaa Abyooneyaal.

Horsanaanta Abyooneyaasha

Haddii aan soo qaadano tirooyinka 6 iyo 7, waxa aan ognahay in 7 ay ka weyn tahay 6. Marka aan eegno xarriiqda tirada, 7 waxa ay midigta ka xigtaa 6, 6 waxa ay midigta ka xigtaa 5, 6 na waa ka weyn tahay 5.



Sidaa oo kale -1 waxa ay midigta ka xigtaa -2, taas oo micnaheedu yahay -1 waa ka weyn tahay -2.

Haddaba:

Marka eber aad uga fogaato dhinaca midig tirada waa ay sii weynaaneysaa. Dhinaca bidixna tirada waa ay sii yaraaneynaa.

Layli

1. Geli $>$, $<$ ama $=$ meelaha banaan

$$+6 \square +3 \quad 0 \square +5 \quad +6 \square -6$$

$$5 \square 9 \quad -6 \square 0 \quad -4 \square -5$$

$$-9 \square -3 \quad -10 \square -9 \quad 14 \square -14$$

2. U qor tirooyinkan horsanaan koreysa

$$-3, +4, 0, -7, +9$$

$$-2, +10, -50, +, -3$$

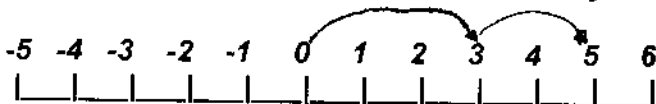
$$-2\frac{1}{2}, -3, -2, +9, 0, -8, +6$$

3. Qor weydaarka tiro kasta oo lagu siiyey

b) +4 t) -3 j) -(-4) x) -12
 kh) +16 d) -19 r) -(-27) s) +49
 sh) -312 dh) -119 c) -(+189) g) -(-210)
 f) 614 q) -702 k) -(-932) l) +695

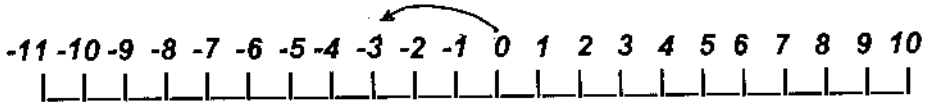
Isugeynta Abyooneyaasha

Hore waxa aan u soo aragnay isugeynta abyooneyaasha aan tabnayn (tirooyinka idil). Isugeynta abyooneyaasha waxba kama duwana tan tirsiiimo, hab ahaan marka aynu adeegsano xarriiqda tirada. Meeshii aynu ka dhihi jirnay midig u soco ayaa waxa aynu adeegsanaynaa jihada togan. Wadarta 3 iyo 2 waxa ay tahay



Abyoonayaal

Bal hadda fiiri sida aynnu ugu muujinno -3 xarriiqda tirada



b) Isugeynta abyoonayaasha marka summadahooda isku mid yihiin.

Tusaale

$$\begin{aligned} +3+5 &= 8 \\ +5+8 &= 13 \\ -2-3 &= -5 \\ -9-4 &= -13 \end{aligned}$$

Xeer 1

Tirooyin summadahoodu ay isku mid yihiin waxa la isku daraa tirooyinka, wadartana waxa la raacinayaa summadda tirooyinku wataan.

t) Isugeynta abyoonayaasha marka summadahoodu ay kala duwan yihiin.

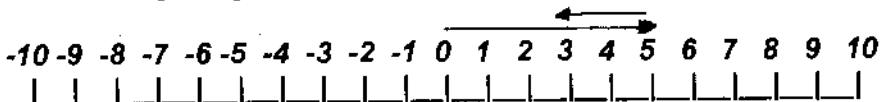
Waxa aan aragnay sida tirooyinka taban loogu muujiyo xarriiqda tirada, bal aan sammayno dhowr tusaale oo isugeyn ah sida

Tusaale

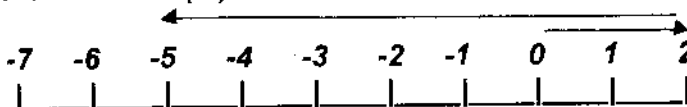
$$+5+(-2)$$

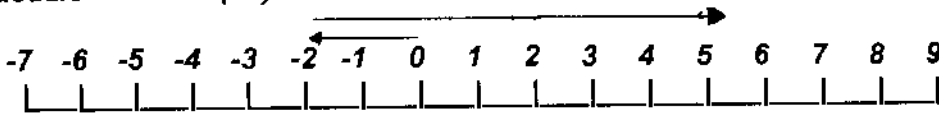
Furfuris

Ka bilow socodka eber ilaa 5 dhinaca jihada togan, ka dibna 2 tallaabo u soco jihada ka soo horjeedda (taban). Haddaba $+5+(-2)=3$ sida ku muujisan jaantuska hoose:



Tusaale $+2 + (-7) = -5$



Tusaale $-2 + (+7) = +5$ **Xeer 2**

Tirooyin summadahoodu kala duwan yihiin waa la kala goynayaa, faraqa soo baxaa waxa uu qaadanayaa summadda tirada weyn.

Layli**1- Buuxi meelaha bannaan**

$(-9) + (+3) =$ $(-4) + (+5) =$ $-8 + (-7) =$

$(-8) + (-5) =$ $(-3) + (-3) =$ $(-15) + (+19) =$

$(-2) + (+6) =$ $-7 + (+7) =$ $(-25) + (+25) =$

2- Dhammaystir Tusahan

+	-3	-2	-1	0	1	2	3
-5							
-4							
-3							
-2							
-1							
0							
2							
3							

3. Sheeg in wadarta tirooyinka soo socda ay togan tahay, taban tahay ama eber tahay? Sheeg Sababta?

b) $-8 + (-12)$ x) $(-18) + 15$

t) $(-11) + 11$ kh) $50 + (-1)$

j) $54 + (-21)$ d) $(-11) + 50$

4. Ku muuji wadarta tirooyinkan xarriiqda tirada

- b) $+8+(-3)$ t) $5+7$ j) $(-4)+9$
 x) $(-8)+(-4)$ kh) $+5+(-5)$ d) $(-7)+(-7)$

5. Raadi wadarta tirooyinkan adiga oo adeegsanaya xeerarka abyooneyaasha ee isugeynta.

- b) $12+(-8)$ t) $(-10)+7$
 j) $46+(-39)$ x) $(-17)+11$
 kh) $50+(-1)$ d) $(-11)+35$

Kala goynta Abyooneyaasha

Waxa aan hore u soo baranay kala goynta tirooyinka idil tusaale $9 - 6 = 3$ loona akhriyo 9 laga jaray 6 waa 3 sidaas oo kale isugeynta abyooneyaasha waxa aan ku soo baranay in

$$9+(-6) = 3$$

loona akhriyo 9 loo geeyay (Lix taban) waa 3 taas waxa aan kala soo bixi karnaa in $9-6 = 9+(-6)=3$ halka (-6) ay tahay weydaarka tirada 6. Sidaas awgeed waxa aan oran karnaa:

$$9 - 6 = 9 + \text{weydaarka tirada 6 oo ah } (-6)$$

Sidaa oo kale:

$$8 - 5 = 8 + \text{weydaarka tirada 5 oo ah } -5$$

$$5 - (-2) = 5 + \text{weydaarka tirada } (-2) \text{ oo ah } 2$$

Haddaba guud ahaan kalagoynta abyooneyaasha waxa loo qeexi karaa sida soo socota

Haddii b iyo t ay yihiin abyooneyaal markaa

**b - t = isugeynta b iyo weydaarka tirada t
 taas oo ah $b - t = b + (-t)$**

Tusaale 1

b) $9 - 5 = 9 + (-5) = 4$

x) $(-3) - (-6) = (-3) + 6 = 3$

t) $3 - 9 = 3 + (-9) = -6$

kh) $4 - (-1) = 4 + 1 = 5$

j) $(-2) - 5 = -2 + (-5) = -7$

Tusaale 2 Soo saar

b) $5 - 8 + 12 - 17$

t) $(-4) + 7 - (-3) - 5$

Furfuris

$$\begin{aligned}
 \text{b) } 5 - 8 + 12 - 17 &= 5 + (-8) + 12 + (-17) \\
 &= (5 + 12) + [(-8) + (-17)] \\
 &= 17 + (-25) \\
 &= -8
 \end{aligned}$$

$$\begin{aligned}
 \text{t) } (-4) + 7 - (-3) - 5 &= -4 + 7 + 3 - 5 \\
 &= -4 - 5 + 7 + 3 \\
 &= -9 + 10 \\
 &= 1
 \end{aligned}$$

Layli

I. Raadi faraqa, kuna muuji xarriiq tiro.

1) $8 - (5) =$

2) $-(8) - (5) =$

3) $20 - (-5) =$

4) $4 - (-12) =$

5) $-30 - (25) =$

6) $1 - (-1) =$

7) $6 - (9) =$

II. Soo saar qiimaha.

b) $15 - 22$

t) $-14 + 7$

j) $-15 + 17 - 9$

x) $(-4) - (-3) - (-2)$

kh) $8 + (-6) - (-4) - 5$

d) $-17 - (-25) + (-8) - 1$

Iskudhufashada Abyooneyaasha

Iskudhufashada tirooyinka idil waxa aynu ku soo baranay in
 $4 \times 7 = 28$, $5 \times 9 = 45$.

Abyooneyaasha toganna waa tirooyin idil, sidaa awgeed waxa aynu ku fekeri karanaa xeerkan.

Xeer 1

Taranka laba abyoone oo togan ama taban waa abyoone togan.

Waxa aynu ognahay in iskudhufashadu ay tahay isugeyn la soo celiyey, sida

$$3 \times 4 = 3+3+3+3 = 12$$

$$2 \times (-3) = -3+(-3) = -6$$

$$-5 \times 4 = (-5)+(-5)+(-5)+(-5) = -20$$

Marka aynu eegno tusaalooyinka sare waxa aynu gaari karnaa xeerkan soo socda.

Xeer 2

Taranka laba Abyoone oo midi togan yahay, kan kalena uu taban yahay waa Abyoone taban.

Tusaale 1

Raadi taranka tirooyinka.

1. $7 \times 8 =$

2. $(-8) \times (-6) =$

3. $5 \times (-7) =$

Furfuris

1. $7 \times 8 = 56$

2. $(-8) \times (-6) = 48$

3. $5 \times (-7) = -35$

Tusaale 2

Soo saar taranka tirooyinkan.

b) $7 \times (-2) \times 3 =$

t) $-3 \times (-4) \times (-5) =$

j) $-4 \times 6 \times (-2) \times (-5) =$

Furfuris

b) $7 \times (-2) \times 3 = -14 \times 3 = -42$

t) $-3 \times (-4) \times (-5) = 12 \times (-5) = -60$

j) $-4 \times 6 \times (-2) \times (-5) = -24 \times 10 = -240$

Layli

B) Taranta abyooneyaashani ma togan tahay mise waa ay taban tahay?

b) $(+3)x(+4)$

t) $(-3)x(+3)$

j) $(-1)x(+8)$

x) $(-8)x(-7)$

kh) $(+5)x(-4)$

d) $(-11)x(4-3)$

r) $(-6)x(-9)$

T) Raadi taranta abyooneyaashan hoose:

b) $(-3)x(+8)$

d) $3x(-4)x2$

t) $(-4)x(-5)$

r) $-2x(-8)x3$

j) $+4(-3)+6$

s) $7x3x(-5)$

x) $(-3)x4+(-3)$

kh) $(+6)x(-9)$

Isuqaybinta Abyooneyaasha

Waxa aynu hore u soo baranay sida laba tiro la isugu geeyo. Waxa kale aynu ogaanay in isuqeybintu ay tahay weydaarka xisaabfalka ee iskudhufashada. Fiiri tusaalooyinka soo socda:

Tusaale 1

$+12$ u qaybi $+3$ taasi waxa weeye maxaa lagu dhufaa $+3$ si aad u hesho $+12$?

Tan waxa aynu qori karnaa $nx(+3) = 12$

Marka haddii $(+4)x(+3) = +12$ waxa aynu helaynaa in $n = +4$

.. $+12 \div (+3) = +4$

Tusaale 2

+18 u qaybi -3. Taasi waxa weeye maxaa lagu dhuftaa (-3) si aad u hesho +18? Tan waxa aynu u qori karnaa $nx(-3) = +18$. Mar haddii $(-6)x(-3) = +18$ waxa aynu helaynaa in $n = -6$, $+18 \div (-3) = -6$.

Tusaale 3

-24 u qaybi (+4) Taasi waxa weeye maxaa lagu dhuftaa (+4) si aad u hesho (-24). Mar haddii $(-6)x(4) = (-24)$. Waxa aynu ognahay in $n = -6$.

.. $-24 \div (+4) = -6$

Tusaale 4

-36 u qaybi -4 taasi waxa weeye: Maxaa lagu dhuftaa (-4) si aad u hesho (-36)? Tani waxa aynu u qori karnaa $nx(-4) = (-36)$ mar haddii $(+9)x(-4) = (-36)$ waxa aynu ognahay in $n = (+9)$.

Tirooyinka abyooneyaasha waxa lagu soo gabagabayn karaa xiriirkooda iyo xeerarkooda xisaabfalka.

Layli

Ku buuxi meelaha bannaan tirada ku habboon.

b) $+12 \div (+4) =$

kh) $+36 \div (-9) =$

t) $+24 \div (-3) =$

d) $-54 \div (+6) =$

j) $-14 \div (+7) =$

r) $+49 \div (+7) =$

x) $-32 \div (-4) =$

s) $+63 \div (-8) =$

sh) $+81 \div (-9) =$

dh) $-72 \div (-9) =$

Fududeynta Jajabyada



Habka isujaridda (isuqaybinta)

Marka jajab hooseeyihiisa iyo sareeyihiisuba lagu dhufto tiro isku mid ah oo aan ahayn eber waxa la helayaa jajab u dhigma jajabkii hore, sida.

$$\frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20} \qquad \frac{3}{4} = \frac{3 \times 6}{4 \times 6} = \frac{18}{24}$$

Haddaba jajabyada $\frac{3}{4}, \frac{15}{20}, \frac{18}{24}$ waa jajabyo isu dhigma.

Buuxi meelaha bannaan

$$\begin{array}{llll} \text{b) } \frac{7}{8} = \frac{\square}{40} & \text{t) } \frac{4}{9} = \frac{32}{\square} & \text{j) } \frac{\square}{7} = \frac{18}{42} & \text{x) } \frac{3}{\square} = \frac{27}{36} \end{array}$$

Haddii aad u fiirsato jajabka $\frac{3}{4}$

isir weynaha ay wadaagaan sarreeyaha iyo hooseeyaha waa hal. Haddaba jajabka $\frac{3}{4}$

waxa uu u qoran yahay sansaanka ugu fudud marka loo eego jajabyadan kale

$$\text{ee u dhigma oo ah } \frac{6}{8}, \frac{9}{12}, \frac{12}{16}, \frac{15}{20} \dots$$

Tusaale 1

U qor jajabka $\frac{15}{27}$ Sansaanka ugu fudud

$$\text{Furfuris } \frac{15 \div 3}{27 \div 3} = \frac{5}{9} \text{ ama isu jarjar sida } \frac{15 \div 5}{27 \div 5} = \frac{3}{9}$$

Fududeynta jajabyada

Habka kale ee loo fududeyn karo jajabyada waxa weeye marka hore waxa la raadiyaa isirrada mutuxan ee sarreeyaha iyo hooseeyaha jajabka, sida:

$$\begin{array}{l|l} 3 & 15 \\ 5 & 5 \\ & 1 \end{array} \quad \begin{array}{l|l} 3 & 27 \\ 3 & 9 \\ 3 & 3 \\ & 1 \end{array} \quad \begin{array}{l} \text{Isirrada mutuxan ee 15 waa 3 iyo 5} \\ \text{Isirrada mutuxan ee 27 waa 3,3 iyo 3} \end{array}$$

Ka dibna isirrada isku midka ah ayaa la isu jarjarayaa.

$$\frac{15}{27} = \frac{3 \times 5}{3 \times 3 \times 3} = \frac{5}{9}$$

Tusaale 2

$$\begin{array}{r} \text{Fududee jajabka} \quad 124 \\ \hline 132 \end{array}$$

Furfuris

$$\begin{array}{l|l} 2 & 124 \\ 2 & 62 \\ 31 & 31 \\ & 1 \end{array} \quad \begin{array}{l|l} 2 & 132 \\ 2 & 66 \\ 3 & 33 \\ 11 & 11 \\ & 1 \end{array}$$

Marka sarreeyaha iyo hooseeyaha isirrada isku midka ah ee ku jira la isu jarjaro waxa la helayaa:

$$\frac{124}{132} = \frac{\cancel{2} \times \cancel{2} \times 31}{\cancel{2} \times \cancel{2} \times 3 \times 11} = \frac{31}{33}$$

$$\text{ama} \quad \frac{124 \div 4}{132 \div 4} = \frac{31}{33}$$

Tusaale 3

$$\begin{array}{r} \text{Fududee} \quad 42 \\ \hline 48 \end{array}$$

Furfuris

$$\frac{42 \div 6}{48 \div 6} = \frac{7}{8}$$

ama Isiri

2	42	2	48
3	21	2	24
7	7	2	12
	1	2	6
		3	3
			1

Marka la isu jarjaro isirrada isku midka ah ee sarreeyaha iyo hooseeyaha waxa la helayaa:

$$\frac{42}{48} = \frac{7 \times \cancel{2} \times 3}{2 \times 2 \times 2 \times \cancel{2} \times 3} = \frac{7}{8}$$

Layli

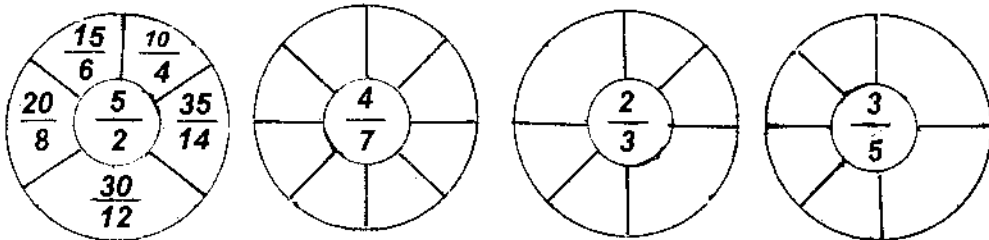
1. U qor Jajabyada soo socda mid kasta sansaanka ugu fudud

- | | | | | | |
|----------------------|------------------------|-----------------------|---------------------|----------------------|-----------------------|
| i) $\frac{14}{42}$ | ii) $\frac{24}{32}$ | iii) $\frac{60}{80}$ | iv) $\frac{45}{81}$ | v) $\frac{108}{162}$ | vi) $\frac{125}{625}$ |
| vii) $\frac{55}{60}$ | viii) $\frac{324}{60}$ | ix) $\frac{128}{135}$ | | | |

2. Fududee jajabyada soo socda adiga oo u qaybinaya sarreeyihiisa iyo hooseeyihiisa u qaybsamaha ugu weyn ee ay wadaagaan.

$$\frac{15}{25}, \frac{64}{128}, \frac{88}{96}, \frac{140}{132}$$

3. Raadi jajabyo u dhigma, jajabyada ku qoran goobo kasta dhexdeeda sida goobadan.



4. Goobo geli jajabyada u dhigma jajabka ugu horreeya.

- | | |
|--|---|
| b) $\frac{2}{3}, \frac{8}{12}, \frac{10}{12}, \frac{15}{10}, \frac{12}{6}, \frac{8}{10}$ | t) $\frac{18}{15}, \frac{3}{10}, \frac{12}{10}, \frac{20}{12}, \frac{6}{5}, \frac{8}{15}$ |
|--|---|

Fududaynta jajabyada

$$j) \frac{7}{4}, \frac{12}{20}, \frac{21}{12}, \frac{40}{16}, \frac{48}{16}$$

$$x) \frac{8}{3}, \frac{4}{8}, \frac{40}{20}, \frac{40}{15}, \frac{6}{16}, \frac{10}{9}$$

Sida Jajab caadi ah loogu rogo Jajab tobanle.

$$\frac{1}{10} = 0.1$$

$$\frac{1}{100} = 0.01$$

$$\frac{1}{1000} = 0.001$$

Tusaale 1

$$U \text{ rog } \frac{2}{5} \text{ tobneed}$$

$$\frac{2}{5} = \frac{2}{5} \times \frac{2}{2} \times \frac{2}{2} \times \frac{4}{10} = \frac{4}{10} = 0.4$$

ama adeegso isuqeybinta caadiga ah

$$\begin{array}{r} 0.4 \\ 5 \overline{) 20} \\ \underline{20} \\ 00 \end{array}$$

$$\frac{2}{5} = 2 \div 5 = 0.4$$

$$\frac{2}{5} = 0.4$$

Tusaale 2

$$U \text{ rog } \frac{3}{4} \text{ boqoleed}$$

Furfuris

$$\frac{3}{4} \times \frac{25}{25} = \frac{75}{100} = 0.75$$

ama $\frac{3}{4} = 3 \div 4 = 0.75$

$$\begin{array}{r} 0.75 \\ 4 \overline{) 30} \\ \underline{28} \\ 20 \\ \underline{20} \\ 00 \end{array}$$

Tusaale 3

<p>U rog 345 ----- kumeed 1000</p>	<p>Furfuris 345 ----- = 0.345 1000</p>	<p>0.345 1000 } 3450 } 3000 ----- } 4500 } 4000 ----- } 5000 } 5000 -----</p>
--	--	--

Marka jajab caadi ah loo beddelayo jajab tobanle waxaa sarreeyaha jajabka loo qaybiyaa hooseeyaha ama hooseeyaha ayaa laga dhigaa 10,100 ama 1000.

Layli

1. U beddel jajabyadan jajab tobanle

b) $\frac{3}{8}$	t) $\frac{6}{25}$	j) $\frac{4}{5}$	x) $\frac{7}{8}$	kh) $\frac{3}{5}$
d) $\frac{15}{100}$	r) $\frac{356}{1000}$	s) $2 \frac{1}{2}$	sh) $1 \frac{1}{4}$	dh) $\frac{3}{20}$

2. Dhammeystir Tusaha hoose

Tirada	Boqolaad	Tobnaad	Koowaad	Tobneed	Boqoleed	Kumeed
Afar dhibic hal			4	1		
Lix dhibic Soddon&Shan						
Eber dhibic afartan & shan		6	0	2	8	6
	3	5	2	4	1	
Sagaashan dhibic Sqaal						

3. Ku buuxi meelaha bannaan $>$, $<$ ama $=$

b) 0.24 _____ 0.50

t) 3 Tobnaad _____ 20 Boqolaad

j) $\frac{13}{10}$ _____ 0.13

x) $\frac{8}{100}$ _____ 0.08

kh) $\frac{45}{10}$ _____ 0.450

d) $\frac{125}{100}$ _____ 0.125

Isugeynta jajabyada iyo tirooyinka dhafan

Marka la isugeynayo laba jajab ama ka badan oo hooseeyeyaashoodu kala duwan yihiin, waxaa marka hore isku mid laga dhigaa hooseeyeyaa-shooda ka hor inta aan la isugeyn.

Haddaba si hooseeyeyaasha loo mideeyo waxa la adeegsadaa dh.y.w. hooseeyeyaasha ama jajabyada oo loo beddelo jajabyo u dhigma oo leh hooseeyeyaal isku mid ah.

Tusaale 1

Isugee

$$\begin{array}{r} 3 \quad 5 \\ \text{---} + \text{---} \\ 4 \quad 8 \end{array}$$

Furfuris

$$\begin{array}{l} 2 \quad | \quad 4 \quad 8 \\ 2 \quad | \quad 2 \quad 4 \\ 2 \quad | \quad 1 \quad 2 \\ \quad \quad | \quad 1 \quad 1 \end{array} \quad \text{Dh.y.w. hooseeyeyaashu waa: } 2 \times 2 \times 2 = 8$$

Markaa $\frac{3}{4} + \frac{5}{8} = \frac{2 \times 3 + 1 \times 5}{8} = \frac{6+5}{8} = \frac{11}{8} = 1 \frac{3}{8}$

Tusaale 2 Isugee

$$\frac{1}{7} + \frac{3}{2} + \frac{1}{4}$$

Furfuris

$$\begin{array}{l|l} 2 & 7 \ 2 \ 4 \\ 2 & 7 \ 1 \ 2 \\ 7 & 7 \ - \ 1 \\ & 1 \ - \ - \end{array}$$

Dh. y.w. jajabyadu waa $2 \times 2 \times 7 = 28$

$$\text{Markaa } \frac{1}{7} + \frac{3}{2} + \frac{1}{4} = \frac{4 \times 1 + 14 \times 3 + 7 \times 1}{28} = \frac{4 + 42 + 7}{28} = \frac{53}{28} = 1 \frac{15}{28}$$

Tusaale 3 Isugee

$$2 \frac{3}{4} + 5 \frac{1}{6}$$

Furfuris

Waxa la raaci karaa habkan.

$$\begin{array}{l|l} 2 & 4 \ 6 \\ 2 & 2 \ 3 \\ 3 & 1 \ 3 \\ & 1 \ 1 \end{array}$$

Dh. y.w. Jajabyada waa 12

$$2 \frac{3}{4} + 5 \frac{1}{6} = 7 \frac{3 \times 3 + 1 \times 2}{12} = 7 \frac{9 + 2}{12} = 7 \frac{11}{12}$$

Layli

I. Raadi wadarta jajabyada soo socda

$$1) \frac{3}{5} + \frac{1}{6}$$

$$2) 3\frac{5}{6} + 2\frac{4}{12}$$

$$3) 1\frac{3}{5} + 5\frac{8}{3}$$

$$4) \frac{3}{4} + \frac{5}{8} + \frac{2}{3}$$

$$5) 5\frac{3}{15} + 6\frac{9}{10}$$

$$6) 2\frac{3}{4} + 3\frac{3}{2} + 8\frac{5}{7}$$

$$7) 7\frac{5}{5} + 8\frac{1}{3}$$

$$8) 3\frac{11}{12} + 4\frac{1}{3} + 9\frac{3}{4}$$

$$9) 10\frac{6}{7} + 12\frac{5}{3}$$

II. Furfur mas'alooyinka soo socda

$$10) \text{ Cali baabuurkiisu waxa uu socday } 3\frac{1}{4} \text{ Km, kan Xasana } 4\frac{2}{3} \text{ Km.}$$

Immisa kiilomitir ayaa labadoodu socdeen?

$$11) \text{ Xaliimo ayaa waxa ay soo gadatay } \frac{1}{3} \text{ Kg iyo } 8\frac{1}{4} \text{ Kg oo hilib ah,}$$

guud ahaan intee Kg oo hilib ah ayay soo gadatay?

$$12) \text{ Maxamed ayaa ku soo gatay buugaag } 8\frac{1}{7} \text{ Sh. So ka dibna}$$

waxaa uu soo gatay buugaag kale oo qiimahooda yahay $5\frac{2}{3}$ Sh. So. Immisa ayuu dhammaantood ku soo gatay?

$$13) \text{ Caasha waxa ay haysatay } 2\frac{1}{4} \text{ kiilo oo sonkor ah. Waxa kale}$$

oo ay soo gadatay $5\frac{1}{4}$ Kiilo oo ah sonkor. Isku jirkooda immisa

kiilo oo sonkor ah ayaa ay haysataa Caasha?

14) Cumar waxaa uu dukaan ka soo gatay $7 \frac{1}{3}$ yaardi oo dhar ah, dukaan kale waxa uu ka gatay $5 \frac{1}{4}$ yaardi oo dhar ah. Guud ahaan intee yaardi oo dhar ah ayaa uu soo gatay?

15) Teneg subag ku jiro ayaa laga shubay $8 \frac{2}{3}$ litir oo subag ah, waxaa ku haray $9 \frac{1}{4}$ Litir. Immisa litir oo subag ah ayaa ku jirtay tenegga Markiisii hore?

Kala goynta Jajabyada iyo tirooyinka dhafan

Sida loo raadiyo faraaqa laba jajab oo hooseeyayaashoodu kala duwan yihiin waxa ay la mid tahay sidii aan hore u soo xusnay oo ah in marka hore isku mid laga dhigaa hooseeyayaasha labada jajab ama waxa la raadiyaa Dh.y.w. hooseeyayaasha si loo mideeyo; ka dibna waxa la raadiyaa faraaqa labada jajab.

Tusaale 1 Raadi faraaqa

$$\frac{1}{6} - \frac{1}{9}$$

Furfuris

$$\begin{array}{r|l} 2 & 6 \ 9 \\ 3 & 3 \ 9 \\ 3 & 1 \ 3 \\ & 1 \ 1 \end{array}$$

Dh.y.w. 6 iyo 9 = $2 \times 3 \times 3 = 18$ Sidaa awgeed

$$\frac{1}{6} - \frac{1}{9} = \frac{3-2}{18} = \frac{1}{18}$$

Tusaale 2 Raadi faraaqa

$$\frac{5}{4} - \frac{2}{3}$$

Furfuris

$$\begin{array}{r|l} 2 & 4 \ 3 \\ 2 & 2 \ 3 \\ 3 & 1 \ 3 \\ & 1 \ 1 \end{array}$$

Dh.y.w. 4 iyo 3 = $2 \times 2 \times 3 = 12$

Sidaa awgeed

$$\frac{5}{4} - \frac{2}{3} = \frac{3 \times 3 - 2 \times 4}{12} = \frac{9-8}{12} = \frac{1}{12}$$

Layli

I. Raadi faraaqa jajabyadan hoose

$$1) \frac{2}{3} - \frac{1}{6}$$

$$4) 3 \frac{4}{5} - \frac{3}{4}$$

$$7) 4 \frac{1}{2} - 1 \frac{1}{2}$$

$$2) \frac{2}{3} - \frac{5}{8}$$

$$5) \frac{6}{7} - \frac{3}{4}$$

$$8) 7 \frac{1}{6} - 2 \frac{5}{9}$$

$$3) 2 \frac{7}{8} - 1 \frac{5}{6}$$

$$6) 7 \frac{1}{3} - 4 \frac{1}{2}$$

$$9) 3 - 1 \frac{2}{3}$$

$$10) 4 - \frac{5}{7}$$

II) Furfur mas'alooyinka soo socda:

1) Sucaad waxa ay soo gadatay $2 \frac{1}{4}$ m oo dhar ah si ay uga tolato saako.

Waxa u soo haray $\frac{1}{8}$ m oo dhar ah. Immisa mitir ayaa ay ka tolotay Saakada?

2) Cali waxa uu haystay fiilo $8 \frac{1}{6}$ m ah. Waxa uu ka jaray $3 \frac{1}{4}$ m.

Waa immisa dhererka fiilada u soo hartay?

3) Xaliimo waxa ay soo gadatay $12 \frac{1}{8}$ Kg oo digir ah. Haddii inta ay karisay dhowr habeen tahay $5 \frac{1}{3}$ Kg oo digir ah. Intee kiilogar-aam ayaa u soo hartay?

Isku dhufashada Jajabka

Iskudhufashada laba jajab qummane ama ma qummane waa jajab hooseeyihiisu yahay taranka hooseeyayaasha labada jajab, sarreeyihisuna yahay taranka sarreeyayaasha labada jajab.

Tusaale 1

$$\text{Iskudhufo } \frac{15}{4} \text{ iyo } \frac{7}{20}$$

Furfuris

$$\frac{15}{4} \times \frac{7}{20} = \frac{105}{80} = \frac{21}{16} = 1 \frac{5}{16}$$

Tusaale 2

$$\text{Fududee } 6 \frac{1}{8} \times 1 \frac{2}{14}$$

Furfuris

Marka hore tirooyinka dhafan u qor jajab ma qummane, ka dibna isu jarjar

$$\begin{aligned} 6 \frac{1}{8} \times 1 \frac{2}{14} &= \frac{6 \times 8 + 1}{8} \times \frac{1 \times 14 + 2}{14} \\ &= \frac{49}{8} \times \frac{16}{14} = 7 \end{aligned}$$

Tusaale 3

$$\text{Raadi } \frac{2}{3} \text{ ka tirada } 453$$

Furfuris

$$\frac{2}{3} \text{ ka tirada } 453 = \frac{2}{3} \times 453 = 302$$

Layli

I. Raadi taranka jajabyada soo socda

$$1) \frac{8}{6} \times \frac{9}{10}$$

$$3) 2 \frac{1}{2} \times 1 \frac{1}{15}$$

$$5) 7 \frac{1}{7} \times \frac{4}{10}$$

$$2) \frac{24}{40} \times \frac{25}{18}$$

$$4) 1 \frac{1}{9} \times 1 \frac{1}{5}$$

$$6) 5 \frac{5}{8} \times \frac{3}{5}$$

$$7) \frac{2}{3} \times \frac{5}{16}$$

$$8) \frac{2}{9} \times \frac{4}{5}$$

$$9) \frac{9}{7} \times \frac{7}{9}$$

$$10) 5 \frac{1}{5} \times 1 \frac{1}{16}$$

$$11) \frac{4}{3} \times \frac{7}{8}$$

$$12) 2 \frac{5}{8} \times 1 \frac{1}{3}$$

II. 1) Raadi $\frac{1}{5}$ ka tirada 625

2) Raadi $\frac{1}{3}$ ka tirada 27

3) Raadi $\frac{3}{4}$ ka tirada 64

III. Mas'alooyin

b) Raadi qiimaha $5 \frac{4}{5}$ mitir oo dhar ah, haddii qiimaha halkii mitir uu yahay $3 \frac{1}{3}$ Sh. So.

t) Haddii shan weel midkiiba muggiisu yahay hal litir, weel kastana ay ku jirto $\frac{3}{4}$ Litir oo biyo ah. Immisa litir ayaa ku jirta shanta weel?

Isu qeybinta jajabyada

Marka laba jajib la isuqeybinayo marka hore waxa la kala roгаа jajabka qaybshaha ah, dabadeedna waa la isku dhuffaa. Sidaa oo kale marka tirooyinka dhafan la isu qeybinayo, waxa aynnu ubeddelnaa jajab maqummane dabadeedna waxa aynnu kala roग्नाa qaybshaha markaasi ayaa aynnu isku dhufannaa.

Tusaale 1

$$\text{Fududee } \frac{4}{7} \div \frac{8}{5}$$

Furfuris

$$\frac{4}{7} \div \frac{8}{5} = \frac{4}{7} \times \frac{5}{8} = \frac{20}{56}$$

Tusaale 2

$$\text{Raadi qeybta } 4.8 \div \frac{6}{8}$$

Furfuris

$$4.8 \div \frac{6}{8} = \frac{48}{10} \div \frac{6}{8} = \frac{48}{10} \times \frac{8}{6} = \frac{32}{5} = 6 \frac{2}{5}$$

Tusaale 3

$$\text{Fududee } 3 \frac{3}{5} \div 3 \frac{6}{7} = \frac{18}{5} \div \frac{27}{7} = \frac{18}{5} \times \frac{7}{27} = \frac{14}{15}$$

Layli

b) Fududayna jajabyada soo socda:

$$1) \frac{33}{38} \div \frac{11}{19}$$

$$2) 3 \frac{1}{2} \div 2 \frac{1}{3}$$

$$3) \frac{3}{4} \div \frac{5}{8}$$

$$4) 3 \frac{3}{4} \div 2 \frac{1}{7}$$

$$5) 5 \frac{5}{8} \div 7 \frac{1}{2}$$

$$6) \frac{3}{25} \div \frac{27}{10}$$

6) Taranka labo tiro waa $5 \frac{1}{3}$. Haddii middood tahay $7 \frac{1}{5}$. Waa maxay midda kale?

7) Dhererka jidka u dhexeeya guriga Xuseen iyo dugsiga waa 180 m. Immisa tallaabo ayaa uu Xuseen u soconayaa haddii dhererka

halkiisa tallaabo ay tahay ---- m?

20

Isugeynta Jajab tobanle

Marka la isugeynayo laba jajab tobanle ama ka badan waxaa loo qorayaa joog u tax iyada oo la isku aaddinayo dhibicda tobanlaha.

Tusaale 1

Raadi wadarta

b) $0.9 + 2.3$

t) $7.6 + 2.38$

j) $17.123 + 3.001 + 2354$

Furfuris

b) $0.9 + 2.3 = 3.2$

$$\begin{array}{r} 0.9 \\ 2.3 \\ \hline 3.2 \end{array}$$

t) $7.6 + 2.38 = 9.98$

$$\begin{array}{r} 7.6 \\ + 2.38 \\ \hline 9.98 \end{array}$$

j) $17.123 + 3.001 + 0.2354 = 20.3594$

$$\begin{array}{r} 17.123 \\ 3.001 \\ + 0.2354 \\ \hline 20.3594 \end{array}$$

Layli

I. Isugee jajab tobanlaha soo socda

1) $5.35 + 8.763$

2) $0.06 + 0.535$

3) $4.435 + 3.05 + 10.95$

4) $15.005 + 3.8$

5) $3.375 + 12.534$

6) $0.059 + 0.508$

II. Furfur mas'alooyinkan

1) Saddex baabuur oo shidaal qaada ayaa xammulkoodu kala yahay 6.875 tan, 7.30 tan iyo 5.38 tan. Immisa tan ayaa ay sidaan saddexda baabuur?

2) Ganacsade ayaa gatay labo nooc oo dhar ah. Dhererka dharka hore waa 8.65 m, kan kalena waa 13.908 mitir. Waa immisa dhererka labada nooc ee dharka ah?

3) Saddex caag oo subag ah ayaa ku kala jirta 7.35 litir, 5.085 litir iyo 8.5 Litir. Immisa litir ayaa ku jirta saddexda caag?

Kala goynta Jajab tobanle ilaa saddex god ah

Marka labo jajab tobanle la kala goynayo, waxaa loo qoraa joog u tax iyada oo la isku aaddinayo dhibicda jajab tobanlaha.

Tusaale 1

Raadi faraaqa u dhexeeya 6.9 iyo 3.5

6.9
- 3.5

3.4

Tusaale 2

Raadi faraaqa 5.01 - 3.902

5.010
- 3.902

1.108

Layli

Jajabyadan soo socda kala goo

1) 6.27 - 3.15

2) 9.67 - 4.128

3) 2 - 1.125

4) 51.950 - 32.514

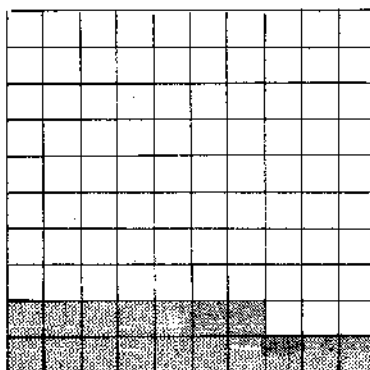
5) 8 - 2.654

6) 6.323 - 1.826

7) 1 - 0.750

8) 64.958 - 21.673

Boqolley



Shaxankan waxa uu ka kooban yahay 100 labajibbaarane. Boqolka
17
labajibbaarane 17 baa ka xardhan. ----- baa xardhan shaxanka oo dhan.
100

Waxa kale oo la oran karaa boqolkii 17 baa ka xardhan shaxanka oo idil.
17 boqolkii waxa loo qoraa 17% . Tiradan 17% oo kale waxa la yiraahdaa
boqolley.

Tusaale

U qor Jajabyadan sansaan boqolley

$$\begin{array}{lll} 5 & 23 & 35 \\ \text{b) } \frac{\text{-----}}{100} & \text{t) } \frac{\text{-----}}{100} & \text{j) } \frac{\text{-----}}{100} \end{array}$$

Furfuris

$$\begin{array}{lll} 5 & 23 & 35 \\ \text{b) } \frac{\text{-----}}{100} = 5\% & \text{t) } \frac{\text{-----}}{100} = 23\% & \text{j) } \frac{\text{-----}}{100} = 35\% \end{array}$$

Sida jajab loogu beddelo boqolley

Marka aan Jajab u beddelayno boqolley, waxa aan raadinaynaa jajab
u dhigma oo hooseeyihiisu yahay 100, sida ku muujisan tusaalooyinka
soo socda.

Tusaale U qor Jajabyadan sansaan boqolley

$$\begin{array}{llll} 3 & 2 & 7 & 15 \\ \text{b) } \frac{\text{----}}{10} & \text{t) } \frac{\text{---}}{5} & \text{j) } \frac{\text{---}}{20} & \text{x) } \frac{\text{----}}{25} \end{array}$$

Fufuris

$$b) \frac{3}{10} = \frac{3 \times 10}{10 \times 10} = \frac{30}{100} = 30\%$$

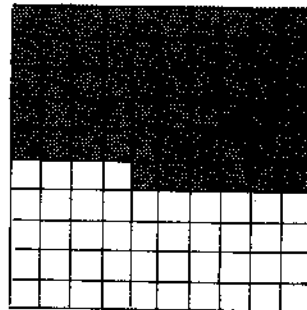
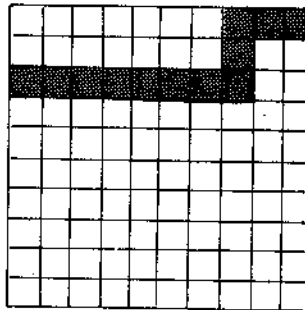
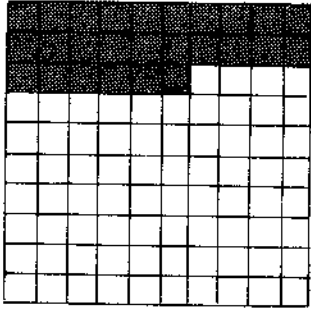
$$t) \frac{2}{5} = \frac{2 \times 20}{5 \times 20} = \frac{40}{100} = 40\%$$

$$j) \frac{7}{20} = \frac{7 \times 5}{20 \times 5} = \frac{35}{100} = 35\%$$

$$x) \frac{15}{25} = \frac{15 \times 4}{25 \times 4} = \frac{60}{100} = 60\%$$

Layli

1. Qor boqolkiiba inta xardhan iyo inta aan xardhaneyn.



2. U qor Jajabyadan sansaan boqolley

$$b) \frac{36}{100} \quad t) \frac{65}{100} \quad j) \frac{18}{100} \quad x) \frac{85}{100} \quad kh) \frac{40}{100} \quad d) \frac{13}{100} \quad r) \frac{70}{100}$$

3. U beddel boqolleydan Jajabyo

$$b) 25\% \quad t) 39\% \quad j) 5\% \quad x) 68\% \quad kh) 37\% \quad d) 52\% \quad r) 90\%$$

4) U qor Jajabyada soo socda sansaan boqolley

$$b) \frac{3}{4} \quad t) \frac{35}{50} \quad j) \frac{1}{4} \quad x) \frac{4}{5} \quad kh) \frac{65}{100} \quad d) \frac{1}{2} \quad r) \frac{9}{25} \quad s) \frac{17}{20}$$

5) Ku buuxi meelaha bannaan tirada ku habboon

$$b) \frac{1}{4} = \frac{?}{100} = \text{-----}\%$$

$$t) \frac{3}{4} = \frac{?}{100} = \text{-----}\%$$

$$j) \frac{4}{5} = \frac{?}{100} = \text{-----}\%$$

$$x) \frac{5}{10} = \frac{?}{100} = \text{-----}\%$$

6) Ku buuxi >, = ama < meelaha bannaan si weeraha ay u noqdaan kuwo run ah.

$$b) 33\% \text{ ----- } \frac{33}{100}$$

$$t) \frac{50}{100} \text{ ----- } 5\%$$

$$j) 25\% \text{ ----- } \frac{52}{100}$$

$$x) 1\% \text{ ----- } \frac{100}{100}$$

$$kh) 45\% \text{ ----- } \frac{40}{100}$$

$$d) \frac{25}{100} \text{ ----- } 25\%$$

Sida Jajab tobanle loogu beddelo boqolley

Jajab tobanle si loogu rogo boqolley, marka hore jajab tobanlaha ayaa loo qorayaa sansaan jajab caadi ah, ka dibna waxa la raadinayaa Jajab u dhigma jajabka caadiga ah oo hooseeyihiisu yahay 100.

Tusaale

Jajab tobanle kasta ee soo socda u qor sansaan boqolley

$$b) 0.4$$

$$t) 0.35$$

$$j) 0.9$$

Furfuris

$$b) 0.4 = \frac{4}{10} = \frac{4 \times 10}{10 \times 10} = \frac{40}{100} = 40\%$$

$$t) 0.35 = \frac{35}{100} = 35\%$$

$$j) 0.9 = \frac{9}{10} = \frac{9 \times 10}{10 \times 10} = \frac{90}{100} = 90\%$$

Layli

1) U qor Jajab tobanle kasta sansaan boqolley

$$b) 0.3$$

$$t) 0.15$$

$$j) 0.45$$

$$x) 0.75$$

$$kh) 0.02$$

$$d) 0.27$$

$$r) 0.5$$

2) Raadi tirada maqan

$$b) 0.65 = \frac{65}{?}$$

$$t) 0.25 = \frac{?}{100}$$

$$j) 0.04 = \frac{?}{100}$$

$$x) 0.13 = \text{-----}$$

Sida boqolley loogu rogo Jajab caadi ah ama Jajab tobanle

Tusaale 1

U qor 30% sansaan Jajab caadi ah una qor jawaabta sansaan fudud.

Furfuris

$$30\% = \frac{30}{100} = \frac{3}{10}$$

Tusaale 2

U qor 45% sansaan Jajab tobanle.

Furfuris

$$45\% = \frac{45}{100} = 0.45$$

Layli

1) U qor boqolleydan sansaan Jajab tobanle

b) 15% t) 12% j) 75% x) 40%

2) u qor boqolleeydan sansaan jajab caadi ah.

b) 20% t) 35% j) 70% x) 25%

kh) 15% d) 4%



Joometeri

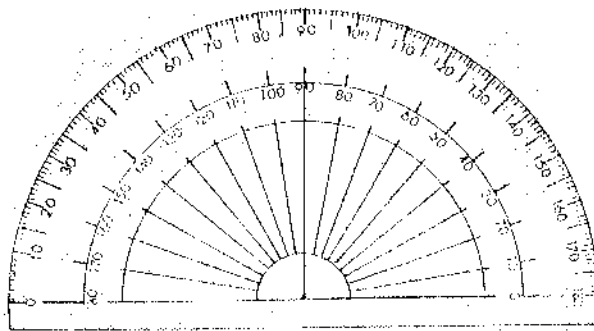
Xaglaha

Waxa aad hore u soo baratay xagal iyo akhriskeeda. Casharkan waxa aad ku barandoontaa cabbiraadda xaglaha.

Sida dhererka iyo culayskuba ay u leeyihiin halbeeg, ayaa ay xagashu u leedahay halbeeg. Haddaba, halbeeg cabbiradeedka xagasha waa digirii. Tusaale ahaan; hal digirii waxaa loo qoraa 1 (waxaana loo akhriyaa hal digrii).

Habka loo cabbiro xaglaha

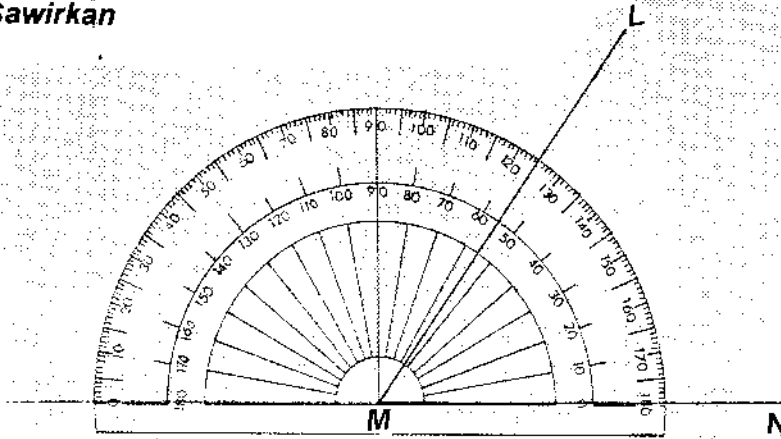
Cabbiraadda xaglaha waxa loo adeegsadaa qalabka loo yaqaano xagal beege.



Xagal beeg

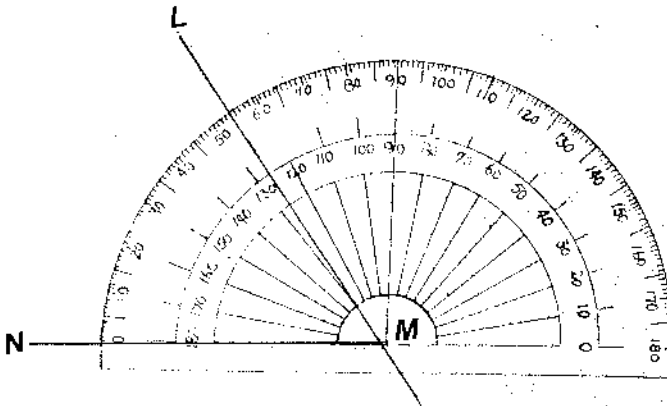
Xagal beeguhu waxa uu leeyahay qiyaaso gudeed iyo kuwo dibadeed oo mid walba ay ku qoran yihiin 0° ilaa 180° . Si aan u helno cabbirka xagasha, mar kasta akhrinta waxa aan ka soo bilaabaynaa 0° ee qiyaas gudeedka ama dibadeedka ee xagal beegaha.

U fiirso Sawirkan



Si aan u cabbirno xagasha LMN iyadoo la isticmaalayo qiyaas gudeedka xagal beegaha. U dul saar xagal beegaha sida ku muujisan sawirka. MN waxa ay ku beegmaysaa eberka qiyaas gudeedka. ML waxa ay ku aadeysaa 55° oo ah qiyaas gudeedka. Sidaas awgeed cabbirka xagasha LMN waa 55°.

**Tusaale
Cabbir xagashan**

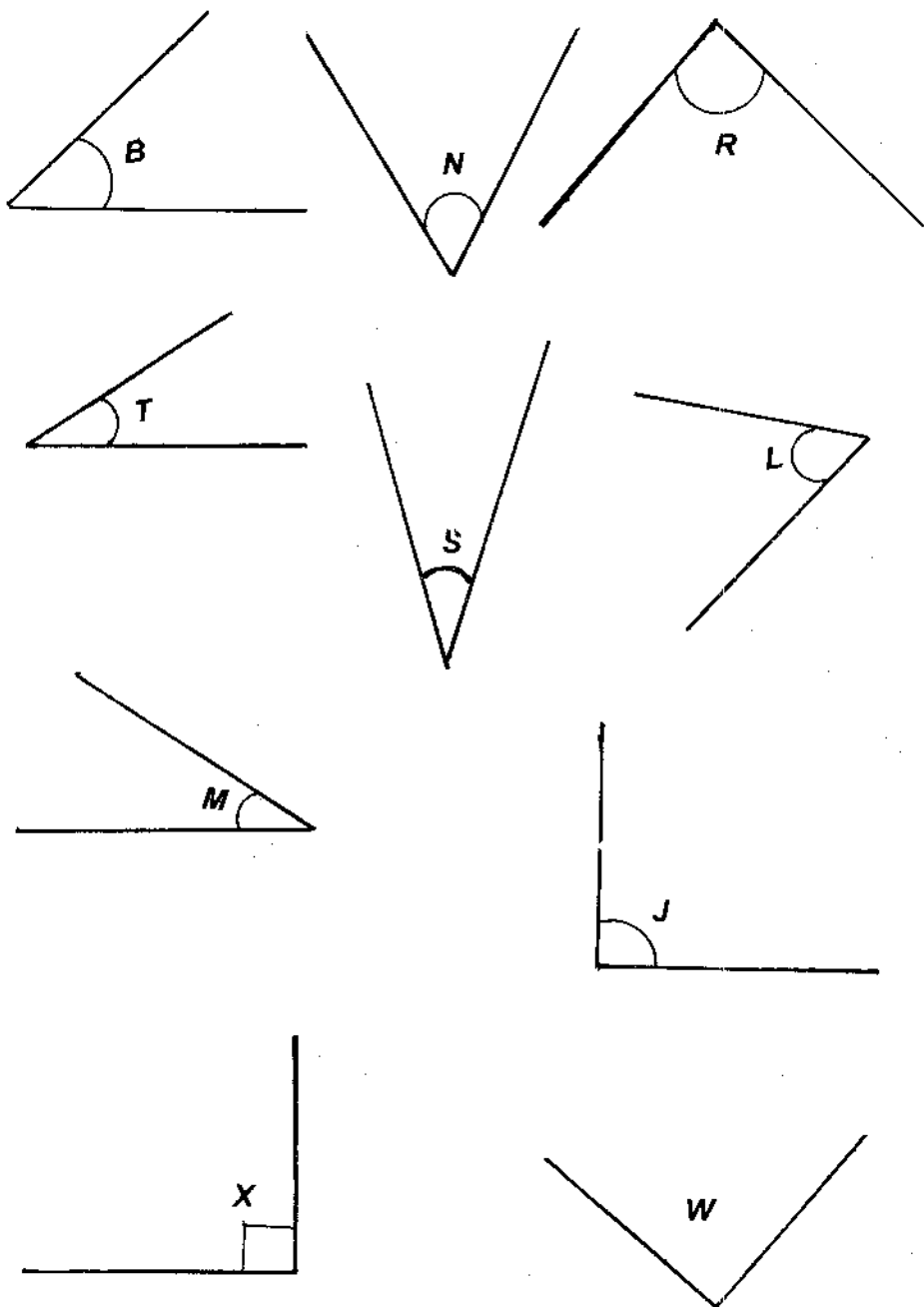


Si loo cabbiro xagasha LMN iyadoo la isticmaalayo qiyaas dibadeedka, xagal beeggaha dul saar si ML ay u goyso eberka qiyaas dibadeedka. MN waxa ay goynaysaa 55°

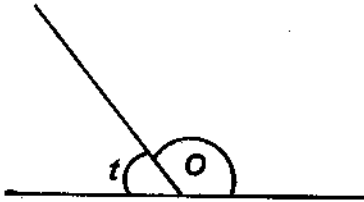
∴ LMN = 55°.

Layli

Cabbir xaglahan soo socda:



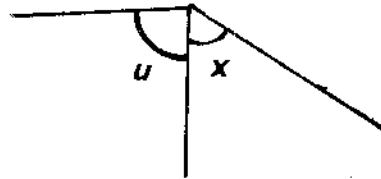
Soo saar Cabbirka xagal kasta:-



$t = \dots\dots\dots$

$o = \dots\dots\dots$

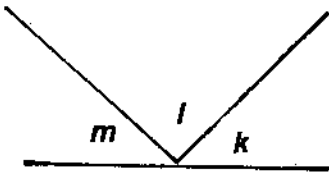
$t + o = \dots\dots\dots$



$x = \dots\dots\dots$

$u = \dots\dots\dots$

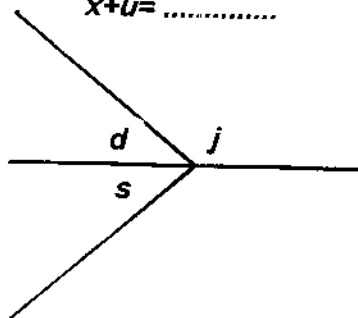
$x + u = \dots\dots\dots$



$l = \dots\dots\dots$

$k = \dots\dots\dots$

$m = \dots\dots\dots$



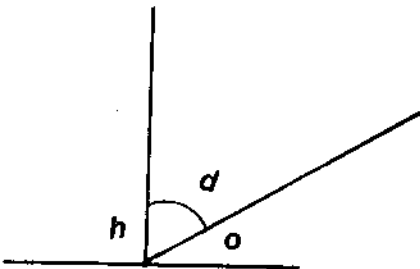
$d = \dots\dots\dots$

$s = \dots\dots\dots$

$j = \dots\dots\dots$

$h = \dots\dots\dots$

$d + s + h = \dots\dots\dots$



$h = \dots\dots\dots$

$d = \dots\dots\dots$

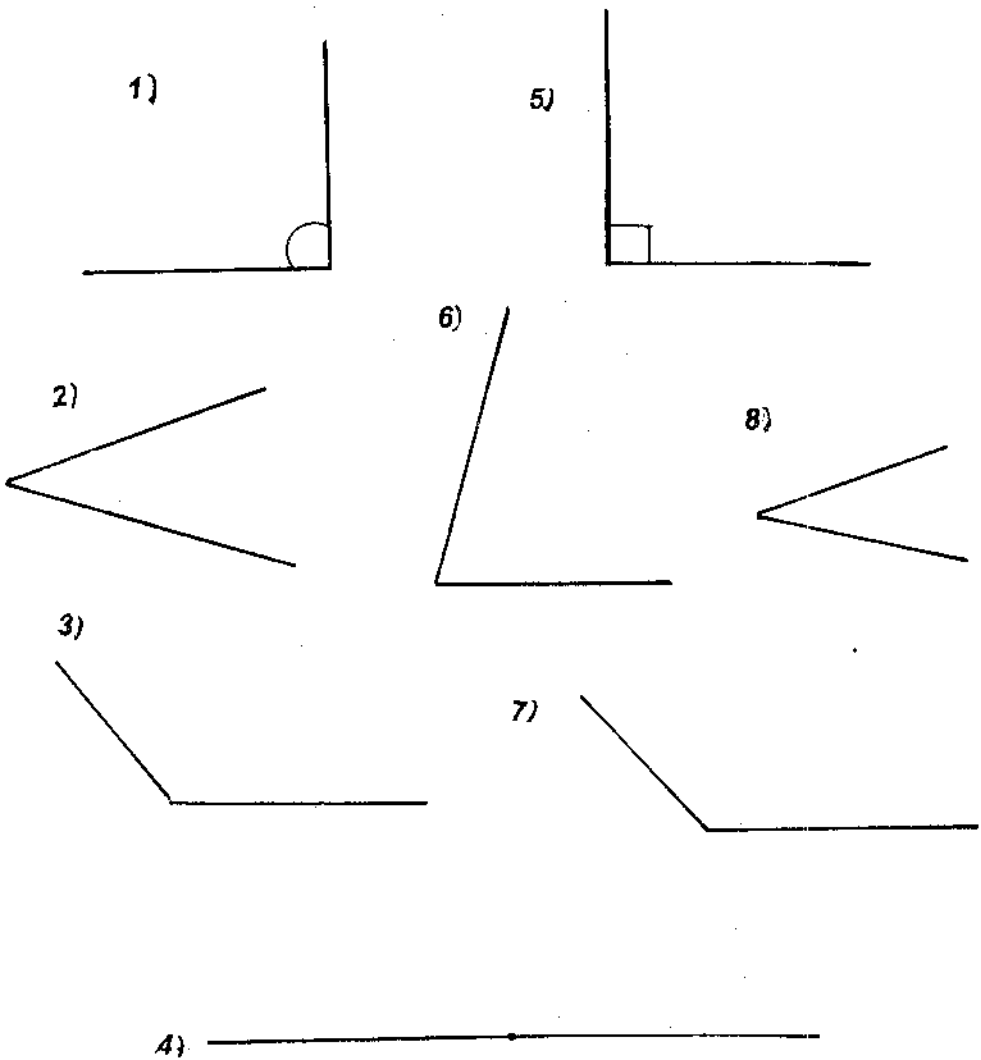
$h + d = \dots\dots\dots$

Noocyada Xaglaha

Casharkii hore waxa aad ku soo baratay sida loo cabbiro xaglaha, waxa aan casharkan ku barandoonaa noocyada xaglaha. Xaglaha waxa lagu kala saara cabbirkooda.

Waxqabad

Adiga oo adeegsanaya xagal beege cabbir xaglahan soo socda:-



Waxa aad aragtaa in xaglaha 1 iyo 5 cabbirkoodu yahay 90° . Xaglahan oo kale waxa lagu magacaabaa xaglo qumman.

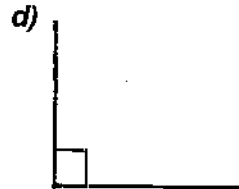
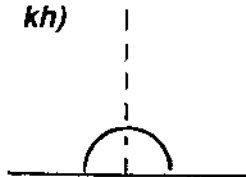
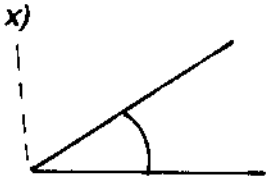
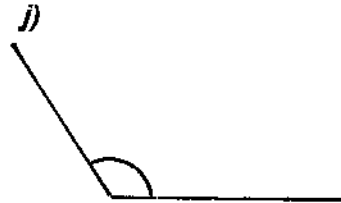
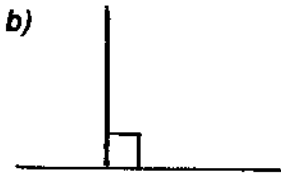
Xaglaha 2,6 iyo 8 cabbiraadoodu waxa ay u dhexeysaa 0° iyo 90° . Haddaba xaglaha ka yar 90° waxa la yiraahdaa xaglo fiiqan.

Xaglaha 3 iyo 7 cabbirkoodu waxa uu u dhexeeyaa 90° iyo 180° , xaglaha noocaas ahna waxa lagu magacaabaa xaglo furan.

Xagasha sawirka afraad cabbirkeedu waa 180° , xagasha noocaas oo kale ah waxa la yiraahdaa xagal toosan. Xaglaha sawirka 8 cabbirkoodu waxa uu u dhexeeyaa 180 iyo 360 , xaglaha noocan oo kale ah waxa lagu magacaabaa xaglo daacsan.

Layli

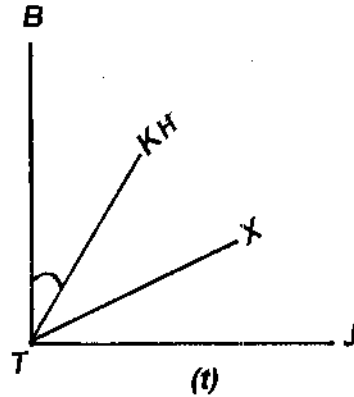
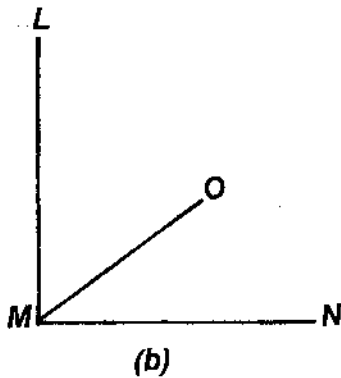
Adiga oo adeegsanaya xagal beege cabbir xagal kasta isla markaana sheeg nooca ay tahay.



Xaglaha deriska ah

Tusaale

Bal u fiirso shaxannadan:



Shaxanka (b)

LMO iyo *NMO* waxa ay wadaagaan dhinaca *MO* iyo geeska *M*.

Shaxanka (t)

TJ iyo *TK* waxa ay wadaagaan dhinac *XT* iyo geeska *T*. *TJ* iyo *BTK* ma wadaagaan dhinac laakiin waxa ay wadaagaan geeska *T*.

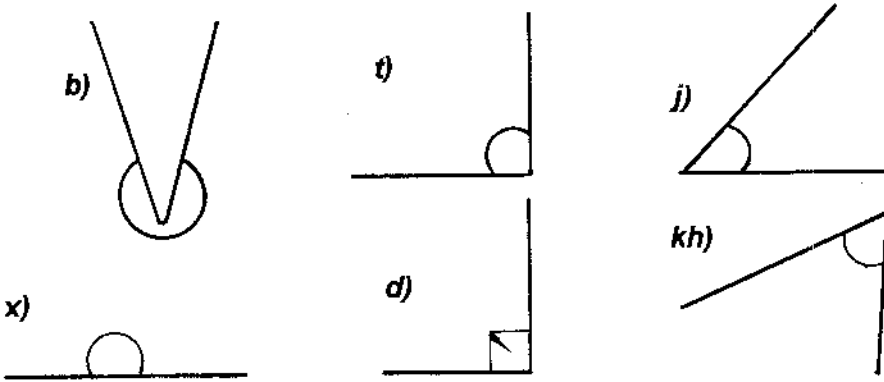
Haddaba

- ◀ *LMO* iyo *NMO* waa xaglo deris ah
- ◀ *TJ* iyo *TK* " " " "
- ◀ *TJ* iyo *BTK* Ma'aha xaglo deris ah

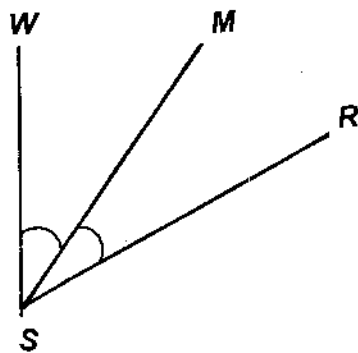
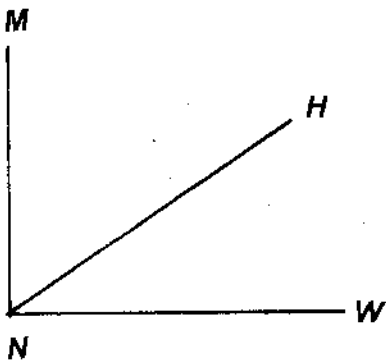
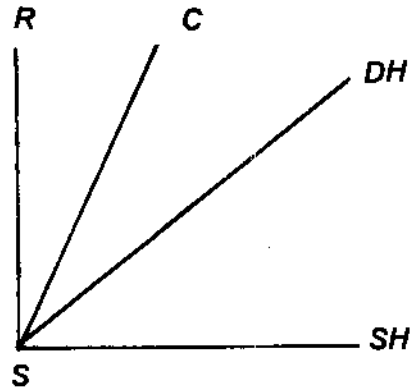
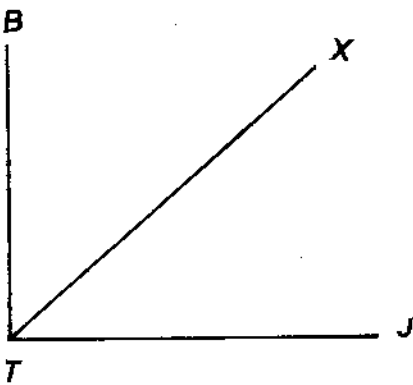
Laba xaglood oo dhinac iyo gees wadaag ah waxa la yiraahdaa xaglo deris ah.

Layli

1. Magacaw mid kasta oo ka mid ah xaglahaan soo socda:-



2. Shaxan kasta sheeg xaglaha deriska ah iyo kuwa aan ahayn

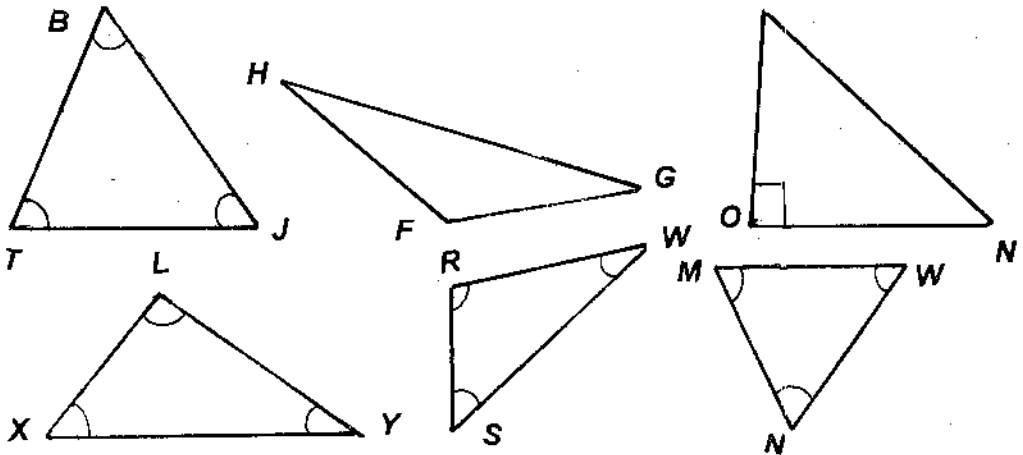


Xaglaha Saddexagal

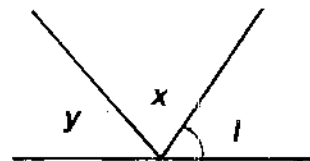
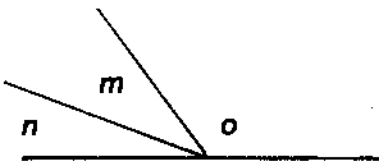
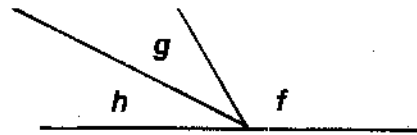
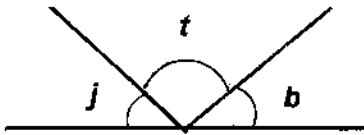
Fasalkii Afaraad waxa aad ku soo baratay saddexagal iyo noocyadiisa. Casharkanna waxa aad ku baran doonta wadarta xaglaha saddexagal.

Waxqabad:

Sawir noocyada kala duwan ee saddexagalladan:-



Saddexagal kasta Jar xaglihiisa, una habee mid kasta sida hoos ku muujisan

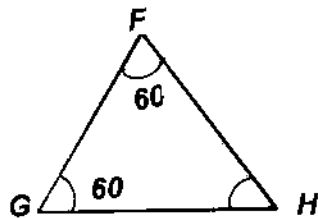
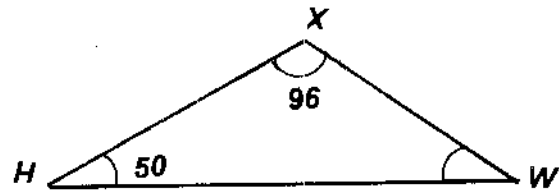
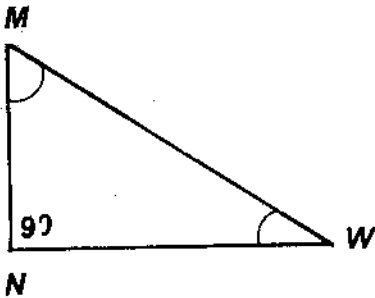
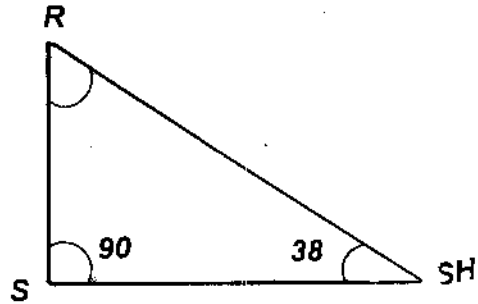
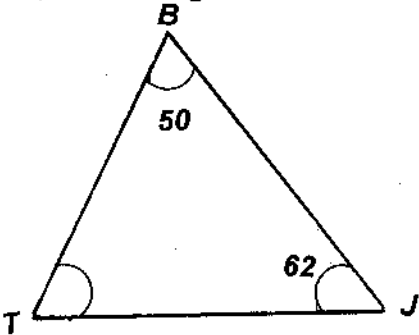


Saddexagal kasta waxa aan sameynayaa xarriiq toosan ama xagal toosan oo cabbirkeedu yahay 180° .

Haddaba wadarta xaglaha saddexagal kasta waa 180° .

Layli

1. Raadi xagasha maqan.



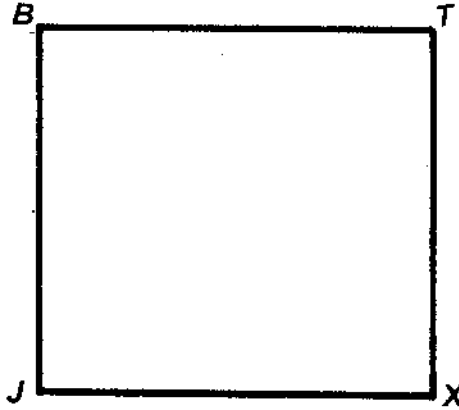
Tusaha hoose waxa ka muuqda cabbirka xaglaha ee saddexagallo kala duwan. Raadi cabbirka xaglaha ee ay u taagan yihiin xarfaha.

1	60°	60°	X
2	85°	85°	Y
3	K	49°	70°
4	115	M	25°
5	W	142°	15°
6	80°	50°	R
7	62°	S	38

Labajibbaarane

Waxa aad ku soo baratay fasalkii afraad sida loo helo bedka labajibbaarane. Casharkan waxa aad ku baran doontaa astaamaha labajibbaarane.

Waxqabad.



a) Shaxankan kor ku sawiran cabbir:

- i) Afarta dhinac
- ii) Afarta xaglood
- iii) Labada xagalgooye oo kala ah BX iyo JT

b) Magacow dhinacyada barbaraha ah.

c) Cabbiriddii xaglaha maxa aad kala soo bixi kartaa?

d) " dhinacyada " " " "

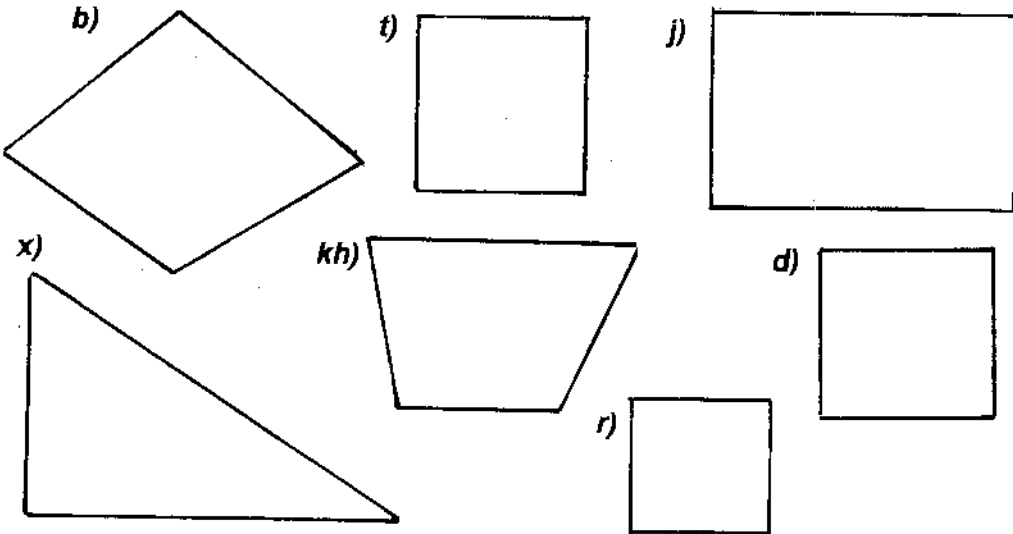
e) " Laba xaglogooye maxa aad kala soo bixi kartaa?

Haddaba, labajibbaarane waa shaxan afar geesle ah oo leh astaamahaan soo socda:

- i) Cabbirka dhinacyadiisa oo dhan waa isle'eg yihiin.
- ii) Dhammaan xaglihiisa waa xaglo qumman.
- iii) Labadii dhinac ee kasta oo iska soo horjeedda waa barbarro.
- iv) Labadiisa xagalgooye waa isle'eg yihiin.

Layli

B) Shaxannada soo socda kuwee ayaa ah labajibbaarane sheeg sababta?



T) Sawir shaxannada dhererka dhinacyadooda iyo xaglahooda lagu siiyey.

i) Dhinacyada iska soo horjeeda waxa ay kala yihiin 5sm, 3sm, xaglaha oo dhamminta waa 90° .

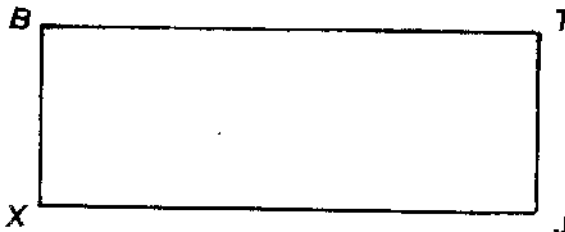
ii) Dhinacyada oo dhan waa 4sm, xaglaha oo dhamminta waa qumman yihiin.

Shaxannada aad sawirtay kee baa ah labajibbaarane. Sheeg sababta.

Laydi

Si aad u ogaato astaamaha uu laydigu leeyhay marka hore samee waxqabadkan.

Waxqabad



Shaxankan kor ku sawiran cabbir:

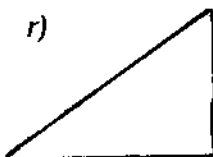
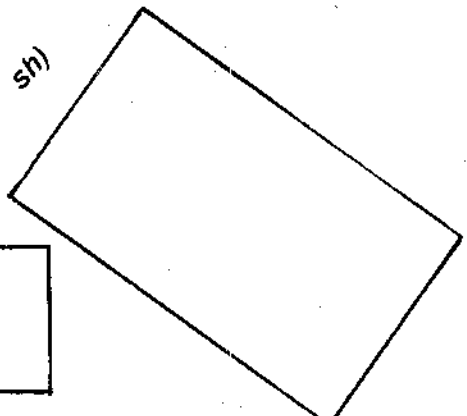
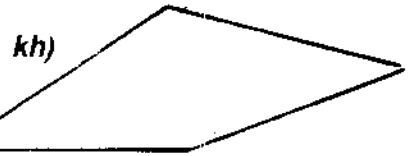
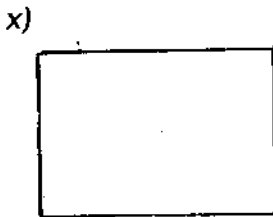
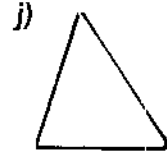
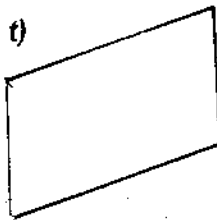
- i) Afartiisa dhinac
- ii) " Xaglood
- iii) Labada Xagalgooye
Maxa aad aragtay?

Haddaba, Laydi waa shaxan Afar geesle ah, oo leh astaamahan:-

- i) Labadii dhinac ee kasta oo iska soo horjeeda waa ay isla'eg yihiin waana barbarro.
- ii) Xaglihiisa oo dhammina waa xaglo qumman.
- iii) Labada xagalgooye waa ay isla'eg yihiin.

Layli

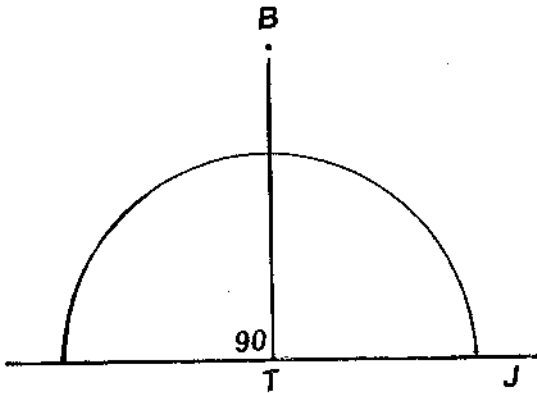
B) Shaxannada hoos ku sawiran kuwee ayaa ah laydi. Sheeg sababtana?



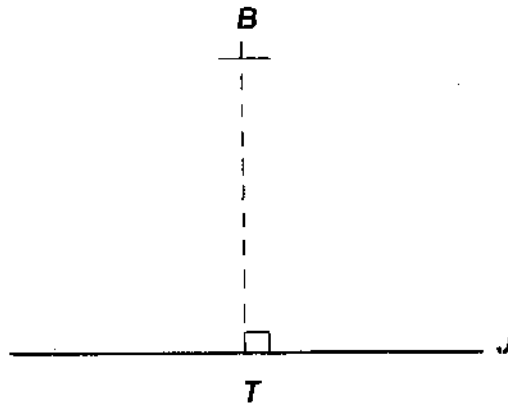
Dhisidda shaxannada : Dhisidda xagal qumman

Marka xagal qumman la dhisaayo waxaa la adeegsadaa xagalbeege iyo mastarad.

Sawir xarriiqda T.J. Dul saar xuddunta xagal beeggaha barta T.
Ka dibna calaamadee barta ku beegan 90° kuna magacaw B.



Ka qaad xagalbeeggaha, iskuna xir B iyo T



Layli

1. Adiga oo adeegsanaya xagalbeege sawir saddexagallada qumman ee dhinacyadoodu iyo xaglahoodu kala yihiin:

b) $AB = 6\text{sm}$, $BC = 4\text{sm}$, iyo $ABC = 90^\circ$

t) $NW = 5\text{sm}$, $WC = 3\text{sm}$, iyo $NWR = 90^\circ$

j) $DR = 7\text{sm}$, $RS = 3\text{sm}$, iyo $DRC = 90^\circ$

x) $MN = 8\text{sm}$, $NF = 4\text{sm}$, iyo $MNF = 90^\circ$

2. Sawir saddexagallada qumman ee soo socda:

b) Saddexagal XYT , dhinaca $XY = 6\text{sm}$ dhinaca $YT = 3.5\text{sm}$.
iyo $\sphericalangle XYT = 90^\circ$

t) Saddexagal ABC , oo xagasha CAB ay tahay xagal qumman,
 $CA = 5\text{sm}$ iyo $AB = 5\text{sm}$.

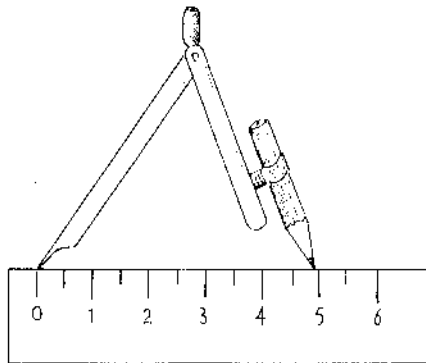
j) Saddexagal RSH , dhinaca $RS = 7\text{sm}$, dhinaca $SH = 3.4\text{sm}$
xagasha RSH ay qumman tahay.

x) Saddexagal GHI , dhinaca $GH = 4\text{sm}$ dhinaca $HI = 8\text{sm}$. Xagasha
 GHI ay qumman tahay.

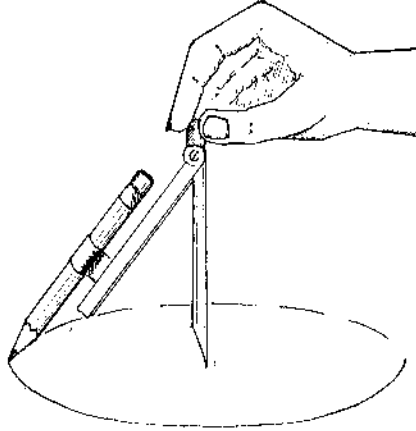
Dhisidda goobo

Marka la sawirayo goobo waxa la adeegsadaa goobeeye.
Fiiri tusaalahan:

Tusaale

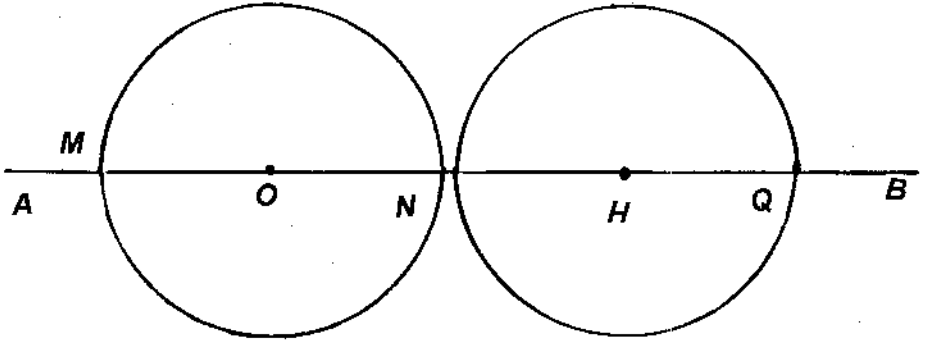


1. Sida sawirka sare ka muuqata fur goobeeyaha 5sm, adeegso mastarad.
2. Ka qabo goobeeyaha foodda sare. Ku mud dhinaca cirbadda waraaqda, dhinaca kalena wareeji adiga oo foodda sare ka haya



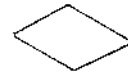
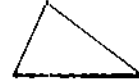
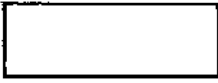
Layli

1. Sawir goobo, xuddunteedu tahay barta O, gacankeeduna yahay 4sm.
2. Sawir goobo, xuddunteedu tahay barta M, gacankeeduna yahay 3sm.
3. Sawir goobo, u qaado W xudun, dhererka gacankeeduna waa 3.5sm.
4. i) Adiga oo adeegsanaya mastarad sawir xarriijin BT.
ii) Bar ku samee xarriijinta dusheeda, una bixi M.
iii) Adiga oo M u qaadanaya unugga goobada, sawir goobo gacankeedu yahay 4.5Sm.
5. i) Adiga oo adeegsanaya mastarad sawir xarriijin AB.
ii) Bar ku samee xarriijinta dusheeda meel ka mid ah una bixi O.
iii) O oo ah unugga saar goobeeyaha adiga oo furaya dherer ah 3sm.
Sawir goobo, M iyo N u bixi baraha ay goobadu ka jartay xarriijinta AB.
- iv) Adiga oo adeegsanaya gacanka dhererkisu yahay 3sm. Saar goobeeyaha afkiisa hore barta N unug ahaan u qaado barta B, wareeji goobeeyaha (Waxa aad sawirtay goobo) U bixi Q barta kale oo ay goobada labaad ka jartay xarriijinta AB (Fiiri shaxanka hoose)



Isu'ekaasho iyo Ballaarin

Maxaa loola jeedaa marka la yiraahdo laba walax ama shaxan waxa ay leeyihiin qaab isku mid ah? Si aad taas u ogaato samee waxqabadkan.



Cabbir xaglaha iyo dhinacyada gudboon ee shaxannada sare. Maxaa aad aragtay?

Saamiga dhinacyada gudboon ma isku mid baa?

Shaxannada isu eg waxa ay leeyihiin:

b) Qaab isu eg.

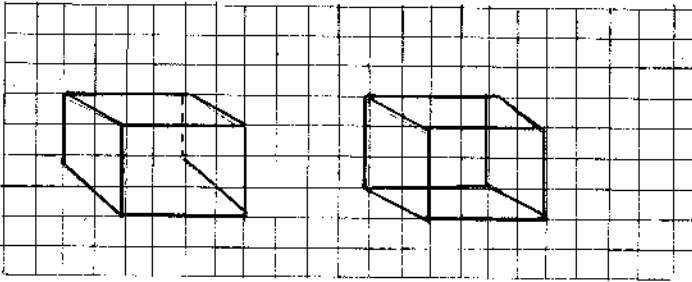
t) Xaglaha gudboon waa ay isle'eg yihiin.

j) Dhinacyada gudboon waxa ay leeyihiin saami isku mid ah.

Layli

- b) Shaxannada hoose sheeg labadii kasta ee isu eg.
t) Sawir laba kasta oo isu eg mid kale oo ka ballaaran.

Rarid

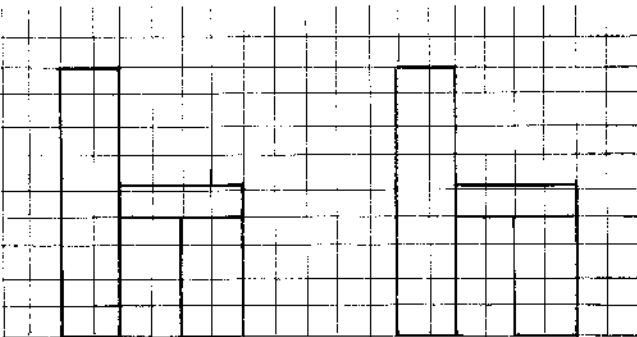


U fiirso labada shaxan ee sare.

Shaxanka t waa shaxanka b oo loo dhaqaajiyey jihada ay fallaartu muujinayso.

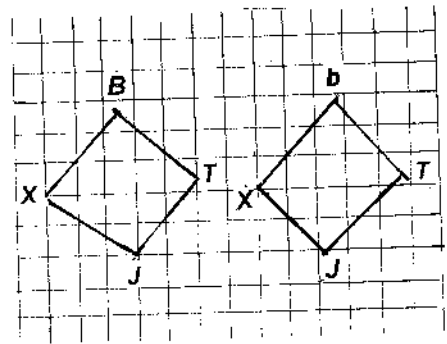
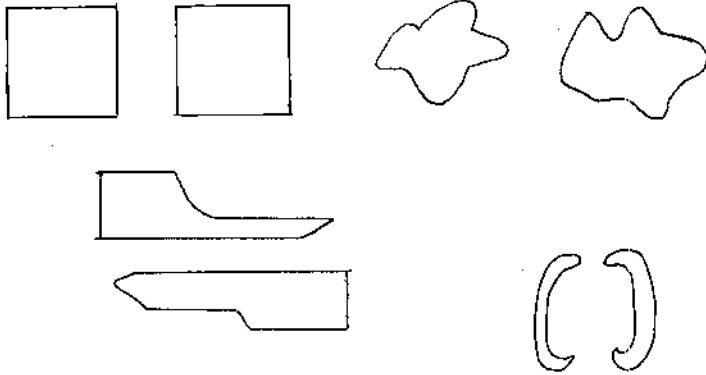
Marka walaxi laga dhaqaajiyo rugteeda hore ee la geeyo meel kale waxa isbeddel ku dhici kara muuqeeda, qaabkeeda iyo baaxaddeeda. Waxaa kale oo suuragal ah in wax isbeddel ahi aanu ku dhicin.

Haddaba marka walax loo dhaqaajiyo hore iyo gadaal ama kor iyo hoos iyada oo ay ku soconayso xarriiq toosan isla markaasna qayb kasta oo walaxda ah ay in isle'eg u jirto qaybta ku beegan ee walaxdii hore ayaa waxa la yiraahdaa rarid.



Layli

1) Shaxannada soo socda ma leeyihiin qaab iyo baaxad isku mid ah?



b) Sheeg baraha T, J X, T, J, X

Barta B Waxa ku beegan barta B
B B

t) Immisa xubnood ayaa ay isu jiraan baraha

B iyo B ?
T iyo T ?
J iyo J ?

3 b) Isbarbardhig cabbiraadaha xarrijimahan.

BT iyo BT
TJ iyo TJ
JX iyo JX

Maxaa aad aragtay?

t) Sheeg sababta shaxanka hore iyo kan dambe aan isu beddelin?

j) Waa maxay isbeddelka keliya ee dhacay?

Aljebra



Doorsoome

Fasalka Afraad waxa aad ku soo baratay Raadinta biiro maqan, sida

$$12 + \square = 21$$

$$\square - 4 = 9$$

$$2 \times \square = 24$$

$$\square \div 7 = 3$$

Si aad u hesho biirada maqan, isku habee tusaalooyinkan.

Tusaale 1

$$32 + \square = 54$$

$$\square = 54 - 32$$

$$\square = 22$$

Tusaale 2

$$8 - \square = 5$$

$$\square = 8 - 5$$

$$\square = 3$$

Tusaale 3

$$6 \times \square = 54$$

$$\square = 54 \div 6$$

$$\square = 9$$

Tusaale 4

$$\square \div 7 = 4$$

$$\square = 7 \times 4$$

$$\square = 28$$

Tusaalooyinka sare labajibbaaranayaasha waxa ay u taagan yihiin biirada maqan. Haddaba labajibbaarane kasta waxa lagu beddeli karaa xaraf in uu u taagnaado biirada maqan. Xarafka u taagan biirada maqan waxa la yiraahdaa doorsoome.

Tusaale 5

$$9 + \square = 15$$

Labajibbaaranaha ku beddel xaraf, sida b si uu ugu taagnaado biirada maqan.

Markaa

$$9 + b = 15$$

$$9 - 9 + b = 15 - 9$$

$$b = 6$$

Layli**I. Raadi biirada maqan**

$$1. \square + 6 = 15$$

$$2. 9 + \square = 21$$

$$3. \square - 7 = 21$$

$$4. 52 + \square = 75$$

$$5. 20 - \square = 26$$

$$6. 6 \times \square = 36$$

$$7. \square \div 3 = 7$$

$$8. 8 - \square = 5$$

$$9. 8 \times \square = 96$$

$$10. \square \div 24 = 3$$

II. Raadi tirada uu u taagan yahay doorsoome kasta

$$1. 7 + m = 12$$

$$2. 5 + 4 = 12$$

$$3. 52 - b = 49$$

$$4. s \times 4 = 32$$

$$5. x - 4 = 12$$

$$6. 49 \div h = 7$$

$$7. m + 5 - 2 = 12$$

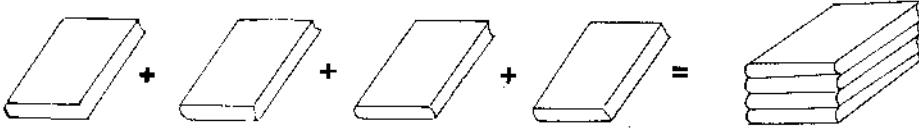
$$8. 5 + n + 6 = 29$$

$$9. 8 \times t = 72$$

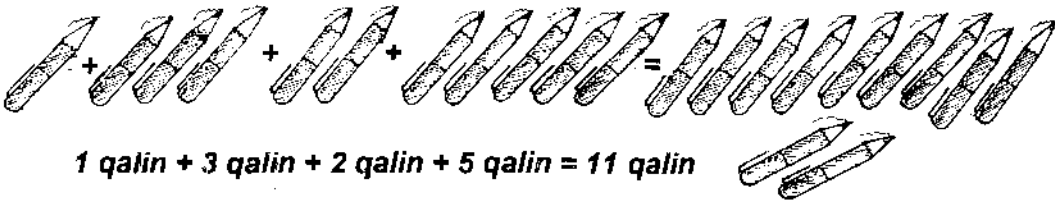
$$10. 7 - c = 12$$

$$11. y \times y = 16$$

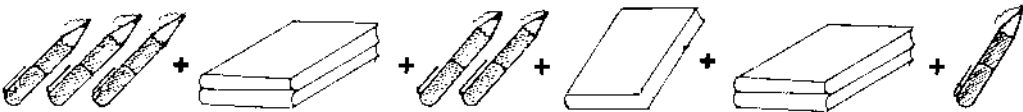
$$12. 52 + t = 144$$

Ururinta tibxaha isu'eg**Tusaale 1**

$$1 \text{ buug} + 1 \text{ buug} + 1 \text{ buug} + 1 \text{ buug} = 4 \text{ buug}$$

Tusaale 2

$$1 \text{ qalin} + 3 \text{ qalin} + 2 \text{ qalin} + 5 \text{ qalin} = 11 \text{ qalin}$$

Tusaale 3

$$(3 \text{ qalin} + 2 \text{ buug}) + (2 \text{ qalin} + 1 \text{ buug}) + (2 \text{ buug} + 1 \text{ qalin}) \\ = 6 \text{ qalin} + 5 \text{ buug}$$

Haddii q ay u taagan tahay 1 qalin b-na ay u taagan tahay 1 buug

$$(3q + 2b) + (2q + b) + (2b + q) = (3q + 2q + q) + (2b + b + 2b) = 6q + 5b$$

Tusaale 4

U qor $8s + 9t - 3s - 5t$ qaab fudud

Furfuris

$$8s + 9t - 3s - 5t = 8s - 3s + 9t - 5t = 5s + 4t$$

Tusaale 5

U qor $w + 2m + 3w + m$ qaab fudud

Furfuris

$$w + 2m + 3w + m$$

$$= w + 3w + 2m + m$$

$$= 4w + 3m$$

Layli

U qor tibxaha soo socda qaab fudud.

- | | |
|----------------------------------|-----------------------------------|
| b) $t + n + t$ | t) $2n + 3m + 5n$ |
| j) $7k + 9k + n$ | x) $15q + 2t + q + 17t + 5q$ |
| kh) $m + n + 2m + 5n + 3m$ | d) $7q + 12q + b + w + 5b$ |
| r) $u + u + m + 3w + m + 2m + w$ | s) $80s + 60t + 10s + 20t$ |
| sh) $99t + 18y + 28y - 20t$ | dh) $26k + 92r + 15k - 21k - 82r$ |
| c) $88sh + 19dh - 15sh$ | |

Tibxaalayaasha

Tibix xisaabeedyadan 5,x,3x,3y, waxa la yiraahdaa haltibixyo. Haltibixu waxa uu had iyo jeer ka kooban yahay tiro keliya sida 5, doorsoome, sida x, ama taranta labadooda sida 3x. Waxa kale uu noqon karaa taran doorsoomayaal (x.a). Haltibix, ama wadarta dhawr haltibix waxa la yiraahdaa tibxaale. Tusaale ahaan $3x+7$ waa tibxaale ka kooban laba tibix xisaabeed, waxaana la yiraahdaa laba tibixle.

Bal u fiirso tusaalooyinkan hoose:-

- b) a, 11a, iyo -5a weheliyayaasha tibxuhu waa ay kala duwan yihiin kuwaas oo kala ah 1, 11 iyo -5 laakiin doorsoomeyaashu waa isku mid, Haddaba tibxuhu waa isu'eg yihiin.
- t) 4x, 3b, 2x. Weheliyayaasha tibxaha iyo doorsoomeyaashaba waa ay kala duwan yihiin. Haddaba waxa aan oran karnaa tibxuhu isuma eka.

j) 3p, 60p, -7p weheliyayaasha tibxuhu waa ay kala duwan yihiin kuwaas oo kala ah 3, 60 iyo -7; laakiin doorsoomeyaashu waa isku mid. Haddaba tibxuhu waa isku-egyihiin.

Tibxaha isu'eg waa tibxaha doorsoomayaashoodu isku midka yihiin

Isugeynta tibxaha isu'eg

Marka aad isugeyneyso tibxaha isu'eg oo ay summadahoodu kala duwan yihiin, raac tallaabooyinka soo socda:-

- 1) Marka hore isugee weheliyayaasha togan.
- 2) Isugee weheliyayaasha taban.
- 3) Kala goo labada wadar, jawaabta raaci wadarta weyn summaddeeda.
- 4) Raaci doorsoomaha ay wadaagaan.

Tusaale 1

Furfuris

Isugee

$$8x + (-6x) + (-4x) + 5x + (-5x)$$

$$8x, -6x, -4x, 5x \text{ iyo } -5x$$

$$= 8x + 5x - 6x - 4x - 5x$$

$$= 13x - 15x$$

$$= -2x$$

Tusaale (2)

Furfuris

Isugee 6a - 4b, 5a + 7b, - 6a + 5b

$$6a - 4b \quad (6a - 4b) + (5a + 7b) + (-6a + 5b)$$

$$5a + 7b \quad = 6a - 4b + 5a + 7b - 6a + 5b$$

$$-6a + 5b \quad = 6a + 5a - 6a - 4b + 7b + 5b$$

$$\text{-----}$$

$$5a + 8b \quad = 5a + 8b$$

Layli

I. Isugee

b) 7x, 4x, 3x iyo 2a

t) 4a, -6a iyo 9a

j) 15y, 10y iyo -8y

x) -15b, 8b, -20b iyo 10b

kh) -18c, -15c iyo 12c

d) 20m, 15m iyo -12m

r) 6b+3c, 5b-2c, 11b+c

s) 5b+3m, 9b-6m, 10b+3m

sh) 4b-r, 6r+b, 9b+6r

dh) 6g+2d, 9g-6d, 2g+8d

c) 3a-c, 6a+5c, 11c-13c

Kala goynta tibxaha isu'eg

Marka la kala goynayo tibxaha isu'eg waxa marka hore la beddelaa sumadda tibixda gooyaha ah ka dibna waa la isugeeyaa tibxaha.

Tusaale (1)

$$\begin{aligned} \text{Kala goo: } 13x \text{ iyo } 6x \\ +13x - (+6x) &= 13x - 6x \\ &= 7x \end{aligned}$$

Tusaale (2)

$$\begin{aligned} \text{Kala goo } -13x \text{ iyo } 6x \\ -13x - (+6x) &= -13x - 6x = -19x \end{aligned}$$

Tusaale (3)

$$\begin{aligned} \text{Kala goo } -13x \text{ iyo } (-6x) \\ -(-13x - (-6x)) &= -13x + 6x = -7x \end{aligned}$$

Tusaale (4)

$$\begin{array}{r} \text{Kala goo } 9x + 13y \text{ iyo } 6x - 3y \\ \begin{array}{r} 9x+13y \\ -(6x-3y) \\ \hline 3x+16y \end{array} \end{array}$$

$$\begin{aligned} \text{ama } (9x+13y) - (6x-3y) \\ &= 9x+13y - (6x-3y) \\ &= 9x - 6x + 13y + 3y = 3x+16y \end{aligned}$$

Layli

1) Kala goo:-

- | | |
|----------------|-----------------|
| b) 12x iyo 5x | r) -2m iyo 7x |
| t) -10y iyo 5y | s) -3x iyo -15x |
| j) 4b iyo -3b | sh) -6c iyo 17c |
| x) 7m iyo -7m | dh) -3t iyo -4t |
| kh) 3x iyo 10x | |
| d) -3 iyo 8y | |

2) Tibxaalaha koowaad ka goo tibxaalaha labaad

- | | | | |
|----------|-------|----------|-------|
| b) 5x+3, | 9x+7 | x) 7x-10 | -3c-8 |
| t) 4m-9 | 5m-9 | kh) 6c-7 | 7c-5 |
| j) 10t-9 | 6t+10 | | |

3) Samee kala goynta soo socota

- | | |
|--------------------------|----------------------------|
| b) 4x+7y+3m iyo 4x+3y-6m | j) 6g-3h+4j iyo -2g-6h-10j |
| t) 3b+2c-4s iyo 5b+2c-8c | |

Qiimeynta tibxaale aljebra

Qiimaha tibxaale aljebra waxa lagu heli karaa in doorsoomaha lagu beddelo qiimihiisa.

Tusaale (1)

Furfuris

Haddii $a = 4$, $b = 6$ raadi qiimaha $a+b$

$$a+b = 4+6 = 10$$

Tusaale (2)

Furfuris

Haddii $m=5$, $c=6$ Raadi qiimaha $4m+7c$

$$\begin{aligned} 4m+7c &= 4 \times 5 + 7 \times 6 \\ &= 20 + 42 \\ &= 62 \end{aligned}$$

Tusaale (3)

Furfuris

Haddii $x = -2$ $y = 6$ Raadi qiimaha $3x+7y+12$

$$\begin{aligned} 3x+7y+12 &= 3(-2)+7(6)+12 \\ &= -6+42+12 \\ &= 48 \end{aligned}$$

Layli

1. Haddii $x=2$, $y=3$ iyo $m=4$ qiimee tibxalayaasha soo socda:-

b) $3x+2y$

kh) $0.53x+0.1m-1.25y$

t) $5m-2x$

d) $4x+9y+3m$

j) $6x+9y+2m$

1

3 1

x) $\frac{1}{2}x + \frac{1}{6}y + m$

6

r) $\frac{3}{4}x + \frac{1}{4}y + m$

4 4

2. Haddii $b=-2$ $n=-5$ $s=6$ Soo saar qiimaha tibxaalayaasha soo socda:-

b) $2b-3s$

x) $3b+n$

t) $5s-6n$

kh) $s-2n$

1

d) $2s-n+3b$

j) $\frac{1}{2}s - 5n + \frac{1}{4}b$

4

r) $9s-b+12n$

Dhisidda iyo furfurista isle'egyada

Tusaale (1)

Wadarta tiro iyo 6 waa 17, waa maxay tirada?

Furfuris

***Ka soo qaad in tiradu tahay x
wadarta tirada iyo 6 waa $x+6$***

$$\begin{aligned}x+6 &= 17 \\x &= 17 - 6 \\x &= 11\end{aligned}$$

Markaa tiradu waa 11.

Tusaale (2)

Haddii da'da saynab oo lagu daray 5 ay tahay 13 sano, Raadi da'da saynab?

Furfuris

***Ka soo qaad da'da seynab x
da'da saynab oo lagu daray 5 waa $x+5$***

$$\begin{aligned}x+5 &= 13 \\x &= 13 - 5 \\x &= 8\end{aligned}$$

Haddaba da'da saynab waa 8 sano.

Tusaale (3)

Tiro marka la labanlaabo oo laga saaro 12 waa 4. Soo saar tirada?

Furfuris

Ka soo qaad tirada in ay tahay x labanlaabka tirada waa $2x$, labanlaabka oo laga saaro 12 waa $2x-12$

$$\dots 2x - 12 = 4$$

$$2x = 4 + 12$$

$$2x = 16$$

$$16$$

$$x = \frac{\dots}{2}$$

$$x = 8 \quad \text{Markaa tiradu waa 8}$$

Tusaale (4)

Haddii Axmed uu ka weyn yahay Maryan 4 sano wadarta da'da Axmed iyo tan Maryana ay tahay 26. Raadi mid kasta da'diisa?

Furfuris

Ka soo qaad da'da Axmed x sano markaa da'da Maryan waa $x-4$ wadarta da'da Maryan iyo tan Axmed waa $x+(x-4)$

$$x+(x-4) = 26$$

$$x+ x-4 = 26$$

$$2x - 4 = 26$$

$$2x = 26+4$$

$$2x = 30$$

$$x = 30$$

$$\frac{\dots}{2} \quad x = 15$$

Markaa da'da Axmed waa 15 sano tan Maryan (15 - 4) sano ama 11 sano.

Layli

I - Furfur isle'egyadan soo socda:-

b) $5a = 3a$ t) $2y+4y = 42$ j) $7y-4y = 21$ x) $3x+5x = 32$ kh) $9m-2m = 21$

d) $9+x=14$ r) $4+y = 30$ s) $x+9 = 16$ sh) $6-x = 8$ dh) $x-7 = 12$

II - Furfur mas'alooyinkan soo socda:-

b) Marka tiro lagu daro 4 waa 13. Raadi tirada?

t) Macallinka da'diisa waa labanlaabka da'da Yuusuf. Faraqa da'da macallinka iyo tan Yuusuf waa 15. Raadi mid kasta da'diisa?

j) Haddii Cilmi uu ka weyn yahay Faadumo 2 sano, wadarta da'da Cilmi iyo tan faadumo ay tahay 12, Raadi da'da Cilmi iyo tan Faadumo?

x) Fasal ay ku jiraan 44 arday bay wiilashu gabdhuhu ka badan yihiin 12. Immisa gabdhood baa fasalka ku jira?



Iskeel-sawireed, tuseyaal, garaaf iyo celceliska xogta (macluumaadka)

iskeel-sawireed

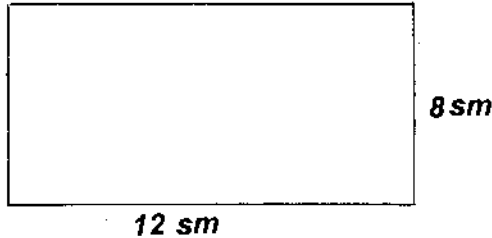
Suuragal ma aha in warqado yar-yar lagu sawiro walxo leh cabbiraado dhaadheer sida (Km iyo m), waxa loo baahan yahay in la adeegsado iskeel-sawireed. Waana in la doortaa iskeel-cabbireed ku habboon cabbirka warqadda intii la adeegsan lahaa cabbiraadda dhabta ah ee walaxda la sawirayo.

Tusaale (1)

Sidee loo sawiri karaa dhul leh qaab laydi dhererkiisu yahay 24m, ballaciisuna yahay 16m. Iyada oo la adeegsanayo iskeel-sawireed?

Furfuris

Waxa inoo muuqata in aanay marna suuragal ahayn in waraaq yar lagu sawiro laydigan. Haddaba u qaado 1sm in uu u taagan yahay 2m. Markaa laydiga cusubi cabbir-sawireedkiisu waa 12sm oo dherer ah iyo 8sm oo ballac ah.



Tusaale (2)

Adiga oo adeegsanaya iskeelka ah in 1sm u taagan yahay 1m. Sawir xarriiqaha sida saxa ah ugu taagnaan kara cabbiraadahan.

b) 10m dherer

t) 8m dherer

j) 5m dherer


x) 13m "

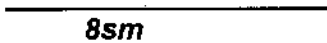
kh) 16m "

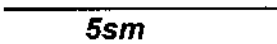
d) 15m "

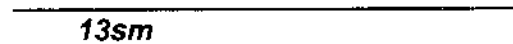
Furfuris

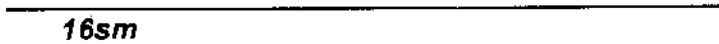
b) Sawirka xarriiqda dhererkeedu yahay 10m waxa si sax ah ugu taagnaan kara sawirka xarriiqda dhererkeedu yahay 10sm. Waxa la mid ah t), j), x) iyo kh)

b) 

t) 

j) 

x) 

kh) 

Tusaale (3)

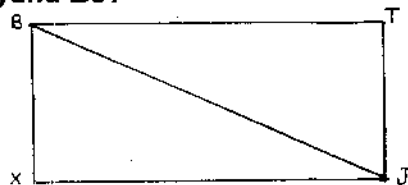
Sawir laydi dhererkiisu yahay 80 sm, ballaciisuna yahay 60 sm, adiga oo adeegsanaya iskeelka ah "1sm in uu u taagan yahay 10sm.

Furfuris

	Cabbirka dhabta ah	Iskeel - sawireed
Dhererka	80sm	$80 \div 10 = 8sm$
Ballaca	60sm	$60 \div 10 = 6sm$

Iskeel-sawireedka

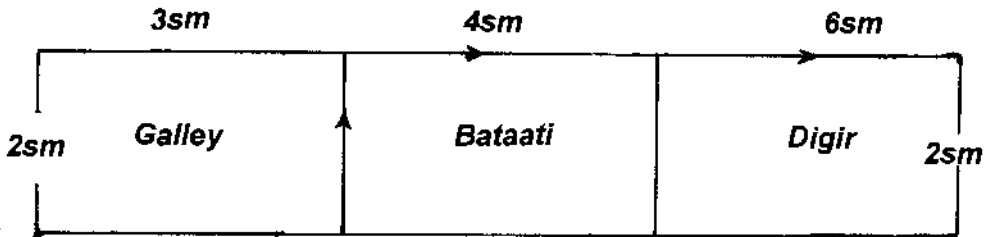
Waa maxay iskeel - sawireedka xagal gooyaha BJ?



Tusaale (4)

Shaxankan hoose waxa uu u taagan yahay iskeel-sawireedka Beerta Dugsiga.

1sm oo loo qaatay in uu u taagan yahay 20mitir. Soo saar cabbiradaaha saxa ah ee Beer kasta.



Furfuris

i) Galley = $(2 \times 20)m$ iyo $(3 \times 20)m$
 = $40m$ iyo $60m$

ii) Digir = (2×20) iyo (6×20)
 = $40m$ iyo $120m$

iii) Bataati = _____ ?

Layli

1) Dhammaystir tusaha hoose adiga oo adeegsanaya iskeelka ah in 1sm uu u taagan yahay 10sm.

Xarriiq	Cabbirka dhabta ah	Iskeel-sawireed
BT	100sm	
XY	80sm	
RS	120sm	
NM	90sm	

- 2) Samee sawirrada saxa ah ee xarriiqaha tusaha su'aasha 1aad ee sare adiga oo adeegsanaya iskeelka lagu siiyey (1sm in uu u taagan yahay 10sm)
- 3) Buuxi tusaha hoose adiga oo adeegsanaya iskeelka (1sm in uu u taagan yahay 10sm):-

LAYDI	CABBIRAADAHA DHABTA AH	ISKEEL - SAWIREED
dherer	130sm	
ballac	80sm	
dherer	70sm	
ballac	40sm	
dherer	80sm	
ballac	60sm	
dherer	20sm	
ballac	10sm	

4) Adiga oo adeegsanaya iskeel sawireeddada su'aasha sare samee iskeel - sawireedka laydi kasta.

5) Xarriiqaha soo socda waxa la sawiray iyada oo la adeegsanayo iskeelka ah 1sm in uu u taagan yahay 10sm. Waa maxay cabbiraaddooda dhabta ahi?

- b) _____
- t) _____
- j) _____
- x) _____
- kh) _____

6) Khariidad ayaa la sawiray iyada oo la adeegsanayo iskeelka ah (1sm in uu u taagan yahay 12sm). Raadi fogaanta dhabta ah ee cabbiraadaha soo socda ee khariidadda

- b) Xafiiska ilaa fasalka 4sm
- t) Irridda dugsigaa ilaa meesha baabuurta taalo 9sm
- j) Meesha calanka ilaa musqusha 12sm
- x) Masaajidka ilaa xafiiska 15sm

- 7) **Cabbir** soona saar mitirka ama sentimitirka ugu dhow dhererrada iyo ballacyada walxaha fasalkaaga, kuna qor jawaabta tuse sida kan hoose oo kale ah. Adiga oo adeegsanaya iskeel sawireed una qaadanaya in 1sm uu u taagan yahay 1m, Dhammaystir joog u taxa kuna muuji tusaha hoose.
Cabbiraadaha iskeel-sawireedyada labo tusaale ayaa lagu siiyey si ay kuu caawiyaan.

Walaxda	Cabbir	cabbirka dhabta ah	Iskeel-Sawiree
1. Fasalka	dherer		
Fasalka	ballac		
2. Miiska	dherer	3 mitir	3 sentimitir
Miiska	ballac	2 mitir	2 sentimitir
3. Xafiiska	dherer		
Maamulaha	ballac		
4. Sabuuradda	dherer		
Sabuuradda	ballac		
5. Fogaanta ay isu	dherer		
jiraan xafiiska iyo fasalka	ballac		

Ururinta Soo Bandhigidda iyo diiwaangelinta xogta (macluumaadka)

Inta badan xogta (macluumaadka) laga soo ururiyo dhacdo ama xaalad la dersayo waxa ay noqdaan kuwo aad u badan oo aan habaysnayn, waxaana loo baahan yahay had iyo jeer in loo soo bandhigo si fudud oo la fahmi karo.

Sideedaba xogaha waxa loo ururiyaa laba hab oo kala ah:

1. Habka tuseyaasha
2. Habka garaafka

Habka Tuseyaasha

Tusaale

Suuq ganacsi ayaa laga helay xogta soo socota:-

Sonkor, Maseggo, Galley, Bur, Bariis, Maseggo, Bariis, Bur, Galley, Bariis, Galley, Mesaggo, Sonkor, Galley, Maseggo, Bariis, Sonkor, Meseggo, Bur, Bariis, Sonkor, Bariis, Bariis, Sonkor, Bariis, Sonkor. Samee tuseyaal muujinaya waxyaabaha laga helo suuqa?

B. Tusaha diiwaangelin Xisaabeed

Nooca	Diiwaangelin Xisaabeed	Soo noqnoqosho dhacdo
Sonkor		6
Meseggo		5
Galley		4
Bur		3
Bariis		8
<hr/>		
Wadar		26

T. Tusaha soo noqnoqosho dhacdo

Nooca	Soo noqnoqoshada dhacdada
Sonkor	6
Meseggo	5
Galley	4
Bur	3
Bariis	8
Wadar	26

Tusahan waxa uu ina tusayaa in:

- i) Wadarta cuntada taalla suuqa in ay tahay 26
- ii) Cuntada suuqa laga helo waxa ugu badan Bariiska
- iii) Burka ayaa ugu yar
- iv) Waxa la isugu xigsiin karaa horsanaan dhinmaysa oo ah: Bariis - Sonkor, Meseggo - Galley - Bur.

Layli

1. Bare dhiga maaddada xisaabta ayaa tijaabo bileed ka qaaday ardaydiisa wuxuuna ku saxayey 10 Darajo, ardaygii 10ka darajo ugu yaraan ka hela 4 darajo, waa uu gudbay. Darajooyinka ay ardaydu heleen waa sida soo socota:-

3, 5, 6, 2, 8, 6, 5, 3, 1, 9, 8, 10, 8, 7, 7, 8, 6, 5, 3, 3, 2, 2, 7, 8, 2, 6, 7, 8, 9, 10.

b) Ku muuji xogta tusaha soo noqnoqoshada dhacdada.

t) Ka soo saar tusaha:

i) Tirada ardayda heshay darajada ugu sarraysa.

ii) Tirada ardayda heshay 4 darajo wax ka yar

iii) Tirada ardayda gudubtay.

2. Arday tiradoodu dhan tahay 20 ayaa la cabbiray dhererkooda waxaana la adeegsaday halbeegga sm dhererkoodu waxa uu noqonayaa sida soo socota:

165, 195, 170, 165, 180, 180, 195, 200, 180, 170, 185, 185, 170, 190, 175, 185, 165, 185, 170, 195.

b) Ku muuji xogta tusaha soo noqnoqoshad dhacdada.

t) Ka soo saar tusaha:

i) Inta dhererkoodu ka yar yahay 185 sm.

ii) Inta dhererkoodu yahay 190 sm iyo wixii ka badan.

iii) Inta ugu gaaban.

Habka Garaafka

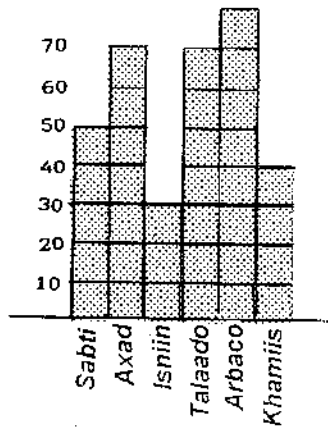
Garaaf Laydiyeed

Tusaale 1

Nin ayaa booqasho ku tegay Isbitaal, oo eegay diiwaanka lagu qoro bukaanka maalin kasta yimaada, waxaana uu soo ururiyey tirada bukaanka yimaada hal toddobaad kuna muujiyey tusahan:

Maalmaha	Sabti	Axad	Isniin	Talaado	Arbaco	Khamiis
Tirada bukaanka	60	85	40	85	90	50

Ka dibna waxa uu ka sameeyey garaaf laydiyeedkan soo socda:-



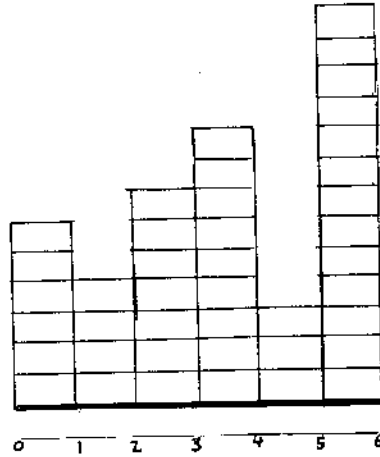
Fiiri garaafka sare isla markaana fasir, kana jawaab su'aalahan:

- b) Maalintee ayaa toddobaadka imaashaha Isbitaalka ugu tiro yar yahay bukaanka?
- t) Immisa bukaan ah ayaa timid maalintii khamiista?
- j) Immisa bukaan ayaa timaadda isbitaalka saddexdii maalmood ee ugu horreysey toddobaadka?
- x) Maalintee ayaa toddobaadka imaashaha Isbitaalka ee bukaanku ugu tiro badnaa?
- kh) Maalmahee ayaa ay imaanshaha tirada bukaanku ay isle'eg tahay?
- d) Waa immisa tirada bukaanka Isbitaalka timaadaa toddobaadka oo idil?
- r) Waa maxay faraqa tirada bukaanka u dhexeeya maalinta uu bukaanka ugu imaasho badan yahay iyo maalinta uu ugu imaasho yar yahay?

Tusaale (2)

Tusaha hoose waxa uu muujinayaa kharashka uu Maxamed ku bixiyey shidaalka gaarigiisa bil kasta oo ka mid ah lixda bilood ee hore ee sannadka. Haddaba adiga oo adeegsanaya xogtan. Sawir garaaf laydiyeed, adiga oo u qaadanaya in 1sm kasta oo joog qiyaaseed uu u taagan yahay 100sh. Isla markaasna 1sm kasta oo jiif qiyaaseed uu u taagan yahay hal bil.

Bisha	Jan	Feb	Mar	Abril	Maajo	Juun
Kharashka	600	450	700	900	300	1250

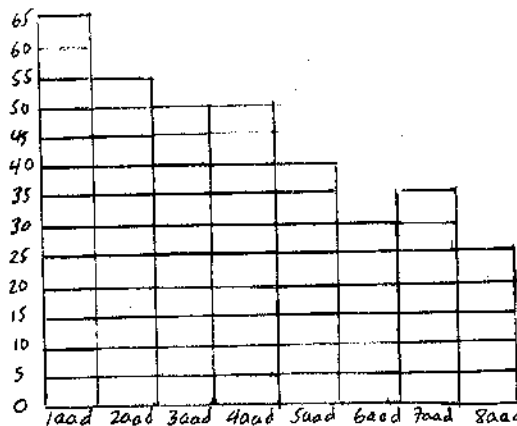


Layli

1. Tusahan hoose waxa uu muujinayaa midab kasta inta arday ee ka hesha. Haddaba adiga oo adeegsanaya xogtan samee Garaaf laydiyeed, una qaado in 1sm oo joog qiyaaseed ah u taagan yahay 4 arday, isla markaasna 1sm oo jiif qiyaaseed ahna u taagan yahay hal midab.

Midabka	Casaan	Cagaar	Buluug	Caddaan	Madow	Hurdi	Bunni
Tirada ardayda	16	8	16	20	28	10	12

2. Maamule Dugsi ayaa rabay in uu muujiyo tirada ardayda wax ka barata fasal kasta oo ka mid ah fasallada 1-8. Waxa uu ku muujiyey garaaf laydiyeedkan hoose:-



Fiiri garaafka sare kana jawaab su'aalahan

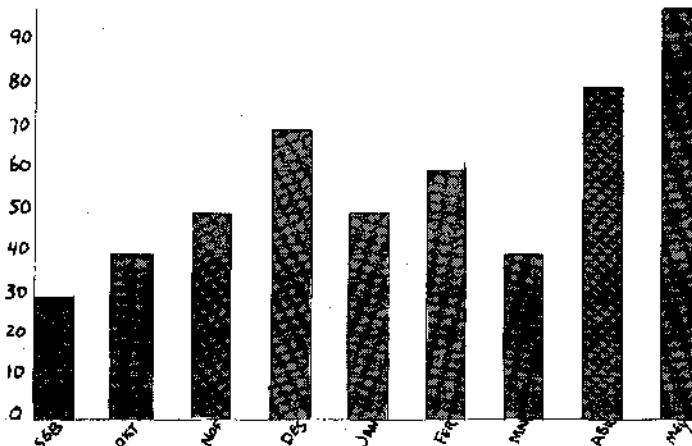
- b) *Waa Immisa tirada ardayda fasalka koowaad?*
 t) *Fasalkee ayaa 50 arday ku jirtaa?*
 t) *Ma jiraa fasal ay ku jiraan 50 arday wax ka badan? Magacow?*
 x) *Dhammeystir tusahan:*

Fasalka	1	2	3	4	5	6	7	8
Tirada	65							

3. *Tusahan waxa uu muujinaya tirada ardaydii ka gudubtay dugsiyada aasaasiga inta u dhexeysay sannadkii 1980 ilaa 1985. Adiga oo adeegsanaya xogtan sawir garaaf laydiyeed, una qaado 1sm oo joog qiyaaseed ah in uu u taagan yahay 1000 arday, isla markaasna u qaado 1sm oo jif qiyaaseed ah in uu u taagan yahay hal sanno.*

Sannadka	1980	1981	1982	1983	1984	1985
Tirada ardayda	6000	3500	8500	2500	7000	5000

4. *Garaaf laydiyeedka hoose waxa uu muujinayaa dhibcaha uu Axmed ka helay tijaabooyinka maaddada Xisaabta sagaalkii bilood ee sannad dugsiyeedku socday.*



Fiiri garaafkan kana jawaab su'aalahan:-

- b) Bishee Axmed uu ugu dhibco badnaa?
- f) Immisa dhibcood ayaa uu keenay Disembar?
- j) Bishee Axmed uu ugu dhibco yaraa?
- x) Buuxi Tusahan:

Bisha	Seb	Ok	Nof	Dis	Jen	Feb	Mar	Abril	Maajo
Dhibcaha	30								



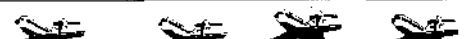

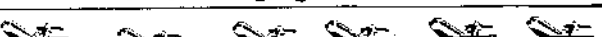

Wax ka qor horumarka Axmed uu ka sameeyey maaddada Xisaabta.

Garaaf Sawireed

Tusaale








Tusaha hoose waxa uu muujinayaa tirada diyaaradaha soo caga dhigtay garoonka caalamiga ee Muqdisho sannad kasta oo ka mid ah inta u dhexeysay 1985 ilaa 1989. Markaa garaafku waxa uu noqonayaa:

Sannad	1985	1986	1987	1988	1989
Tirada diyaaradaha					

Sannadka	 = 4 diyaaradood
1985	
1986	
1987	
1988	
1989	

Tusaale

Garaaf sawireedka hoose waxa uu muujinayaa tirada ardayda ka maqanayd dugsiga muddo hal toddobaad ah.

Maalinta	 = 5 Arday
Sabti	
Axad	
Isniin	
Talaado	
Arbaco	
Khamiis	

Fiiri garaafka kana jawaab su'aalahan:

- b) Maalintee ayaa ardaydu ugu maqnaasho yar yihiin?
 f) Immisa arday ayaa maqnayd maalinta khamiista?
 j) Immisa arday ayaa maqnayd saddexda maalmood ee hore ee toddobaadka?
 x) Waa maxay faraqa u dhexeeya maqnaashaha ardayda saddexda maalmood ee hore iyo saddexda maalmood ee dambe ee toddobaadka?

kh) Buuxi tusahan

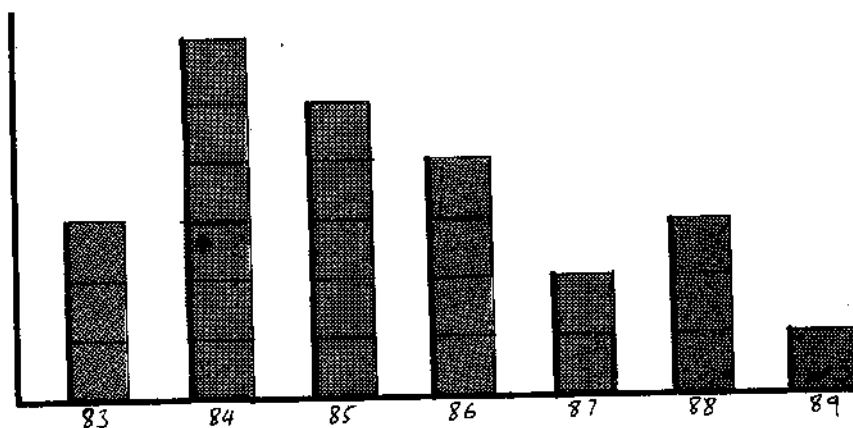
Maalmaha	Sabti	Axad	Isniin	Talaado	Arbaco	Khamiis
Tirada ardayda maqnayd					10	

Tusaale

Tusaha waxa uu muujinaya wax soo saarka warshadda Baastada sannadaha 1983 ilaa 1989, adiga oo adeegsanaya xogtan ka samee graaf sawireed una qaado in uu u taagan yahay 2000 kartoona oo Baasto ah.

Sannadka	83	84	85	86	87	88	89
Tirada kartoona	6000	1200	10000	8000	4000	6000	2000

Furfuris



Layli

1. Garaaf sawireedkan hoose waxa uu muujinaya ciyaaraha ay ardayda fasalku jecel yihiin.

Ciyaarta	= 1 Arday
Kubbadda cagta	
Kubbadda laliska	
Gacanta	
Kubbadda kolayga	

Fiiri garaafka kana jawaab su'aalahan:

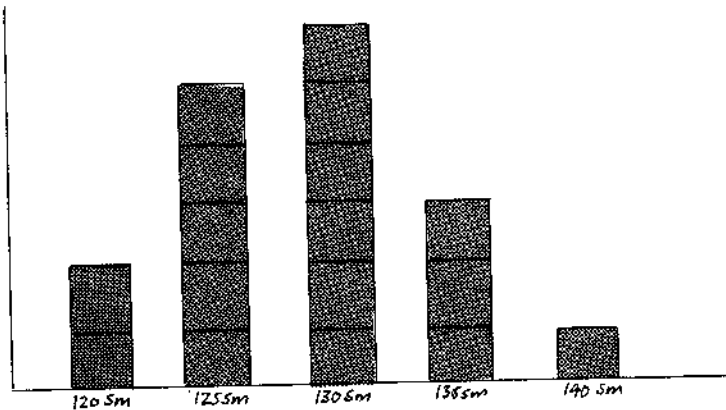
- b) Immisa arday oo fasalka ka tirsan ayaa jecel kubbadda laliska?
- t) Cayaartee ayaa ay ugu jecel yihiin ardayda fasalka dhigata?
- j) Cayaartee xiisaha ardaydu ugu yar yahay?
- x) Buuxi tusahan:

Ciyaarta	Cagta	Laliska	Gacanta	Kolayga
Tirada ardayda			7	

2. Tusahan waxa uu muujinayaa miraha ka soo go'ay Beer sannadahii 1980 ilaa 1985. Adiga oo adeegsanaya xogtan sawir garaaf sawireed una qaado in uu u taagan yahay 200 oo kintaal oo galley ah.

Sannadka	1980	1981	1982	1983	1984	1985
Tirada Kintaallada	600	800	1000	400	1200	8000

3. Garaaf sawireedka hoose waxa uu muujinayaa tirada ardayda isku dhererka ah. U qaado in uu u taagan yahay labo arday.



Fiiri garaafkan kana jawaab su'aalahan:

- b) Immisa arday ayaa dhererkoodu yahay 130 sm?
- t) Waa immisa tirada ardayda?
- j) Waa immisa tirada ardayda ugu gaaban
- x) Buuxi tusahan:

Dhererka (Sm)	120	125	130	135	140
Tirada Ardayda	10				

4. Tusaha hoose waxa uu muujinayaa inta baabuur hal toddobaad soo gashay magaalada, adiga oo adeegsanaya xogtan, sawir garaaf sawireed una

qaado = 10 baabuur.

Maalinta	Sabti	Axad	Isniin	Talaado	Arbaco	Khamiis
Tirada baabuurta	70	80	60	40	70	50

Garaaf - Xarriiqeed

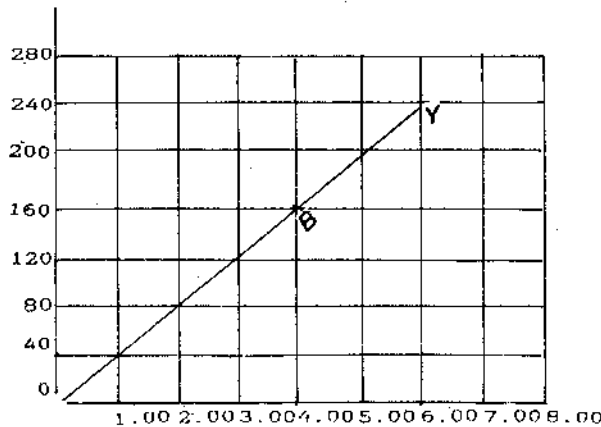
Tusaale

Garaaf-xarriiqeedka hoose waxa uu muujinayaa nin safarkiisa. Isaga oo ka tegay magaalada X una socda magaalada Y, siina maraya magaalada B.

U qaado joog-qiyaasaadka halkii labajibbaaraneba in uu u taagan yahay 40km.

Jiif-qiyaaseedka halkii labajibbaaraneba in uu u taagan yahay hal saac.

Fiiri garaafkan kana jawaab su'aalaha soo socda:



- b) Waa immisa fogaanta uu jaray ninku marka ay saacaddu ahayd 3:00 GD
- t) Waa immisa fogaanta ay isu jiraan magaalooyinka Y iyo X?
- j) Goorma ayaa uu ninku gaaray magaalada B?
- x) Immisa kiilomitir ayaa uu jaray marka ay saacaddu ahayd 3:30 GD?
- Kh) Waa maxay fogaanta u dhexeysa magaalooyinka B iyo Y?
- d) Immisa saacadood ayaa ay ku qaadatay in uu jaro 200 Km?
- r) Waa maxay fogaanta uu jari karo inta u dhexeysa 2:00 GD iyo 5:00 GD?

Furfuris

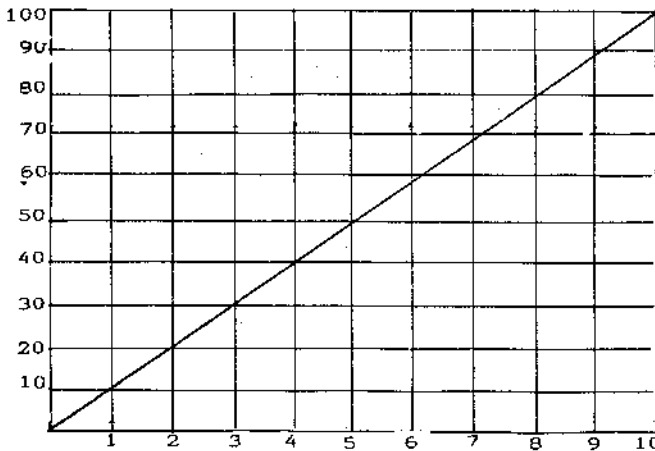
- b) Marka ay saacaddu ahayd 3:00 GD. Ninka waxa uu jaray 120 Km.
 t) Magaalooyinka Y iyo X waxay isu jiraan 240 Km.
 j) Magaalada B waxa uu gaaray marka ay saacaddu ahayd 4:00 GD.
 x) Marka ay saacaddu ahayd 3:30 GD waxa uu jaray 140km.
 kh) Magaalooyinka B iyo Y waxa u dhexeeya 80 Km.
 d) 5 saacadood ayaa ay ku qaadatay in uu jaro 200Km.
 r) Inta u dhexeysa 2.00 GD iyo 5.00 GD waxa uu jari karaa 120 km.

Layli

- 1) Garaaf - xarriiqeedka hoose waxa uu muujinayaa qiimaha hal Kg Bariis ah una qaado:

Joog qiyaaseedka : sm = 10 Shilin

Jiif qiyaaseedka : sm = 1kg



Fiiri garaafkan kana jawaab su'aalahan:

- b) Immisa ayaa aad siisan lahayd 3kg oo Bariis ah?
 t) Immisa Kg oo Bariis ah ayaa aad ku heli kartaa 60 Sh.So?
 j) Immisa Sh.So ayaa lagu heli karaa $3\frac{1}{2}$ Kg oo Bariis ah?
 x) Ganacsade ayaa 95 Sh. ku iibsaday Bariis, Haddaba immisa Kg oo Bariis ah ayaa uu ku helayaa?
 2) Tusahan hoose waxa uu muujinaya inta dhalo oo caano ah ee ay sameyso warshadda caanaha saacaddiiba.

Saacadda	1	2	3	4	5
Tirada dhalooyinka	50	100	150	200	250

Adiga oo adeegsanaya xogta tusaha samee garaaf xarriiqeed kana jawaab su'aalahan:-

- b) Immisa dhalo oo caano ah ayaa la samayn karaa $\frac{1}{2}$ saac?
- t) Immisa dhalo oo caano ah ayaa la samayn karaa $4\frac{1}{2}$ saac?
- j) Immisa saac ayaa ay warshaddu ku sameyn kartaa 120 dhalo oo caano ah?
- x) Immisa dhalo ayaa ay sameyn kartaa warshadda, haddii ay shaqeyso 8 saacadood maalin kasta?

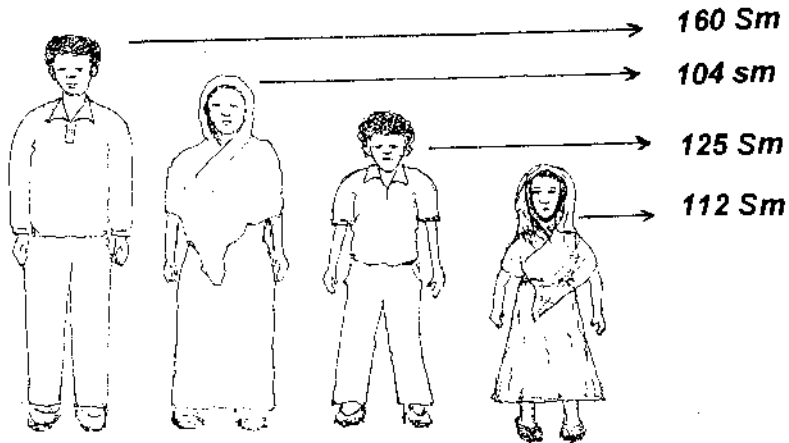
Celcelis

Raadi celceliska joogga afarta qof ee sawirka hoose:

Tusaale

Marka la raadinayo celcelis waxa la raacaa habkan

- b) marka hore waxa la raadiyaa wadarta xaddiyada walxaha.
- t) Ka dibna wadarta ayaa loo qaybiyaa tirada walxaha



Furfuris

$$\begin{aligned} \text{Celcelinta joogga waa: } & 160 + 125 + 115 + 104 & 504 \\ & \underline{\hspace{2cm}} & \underline{\hspace{2cm}} \\ & 4 & 4 \\ & & = 126 \text{ Sm} \end{aligned}$$

Tusaale

Raadi celceliska dhererradan 25 Sm, 40 Sm, 55 Sm, 15 Sm, 5 Sm.

Furfuris

$$\begin{aligned} \text{Celceliska dherarrada} = & \frac{25 + 40 + 55 + 15 + 5}{5} = \frac{140}{5} = 28 \text{ Sm} \end{aligned}$$

Layli

1) Raadi celceliska waxyaabhan soo socda:

- b) 55Kg, 35kg, 65kg, 45Kg, 60Kg, 39Kg.
 t) 10 Litir, 25 Litir, 30 Litir, 45 Litir, 55 Litir.
 j) 20M, 25M, 22m, 23m, 30m.
 x) 15 Sano, 20 Sano, 35 Sano.

2) Tusahan hoose waxa uu muujinayaa dhibcaha Cali uu ku helay maaddo kasta tijaabooyinkii lixda bilood ee hore ee sannad dugsiyeedka.

Maaddada	Dhibcaha					
	Jan	Feb	Mar	Abril	Maajo	Juun
Xisaab	65	66	72	60	75	78
Somali	50	45	63	56	62	70
Carabi	65	75	68	60	72	78
T/Islaam	52	48	65	59	68	70
Saynis	58	75	65	62	78	80

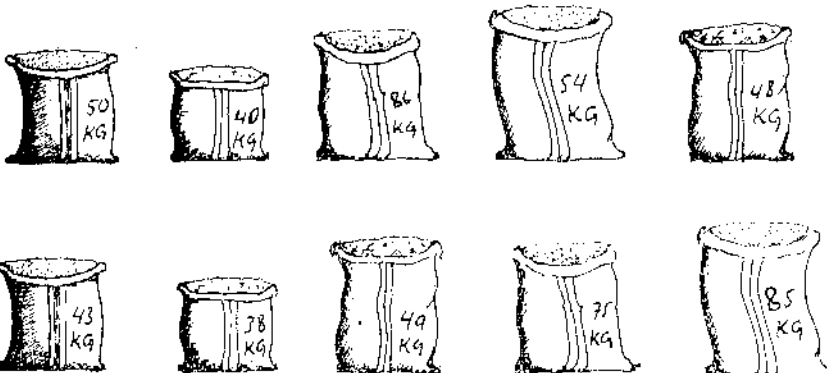
b) Soo saar celceliska dhibcaha Cali ee maaddo kasta ee bilaha oo idil?

t) Maaddadee ugu celcelis sarreysa?

j) Maaddadee ugu celcelis hooseysa?

x) Soo saar celceliska dhibcaha bil kasta?

3) Raadi celceliska culeyska jawaannadan



4) Soo saar celceliska tirooyinkan soo socda:-
Sh: 3.75, Sh: 4.90, Sh: 2.45 Sh: 3.2 Sh: 4.12

5) Raadi celceliska kuwa soo socda:

b) Tirooyinka mutaxan ee u dhexeeya 8 iyo 35?
t) Dhufsanayaasha 3 ee u dhexeeya 5 ilaa 30?

6) Afar buug ayaa qiimahoodu yahay 85 Sh. Haddii saddex buug uu qiimahoodu kala yahay 24 Sh, 15 Sh iyo 35 Sh.

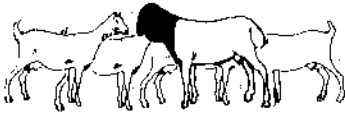
b) Soo saar qiimaha Buugga afraad?
t) Waa maxay celceliska qiimaha afarta Buug?

URURRO



Waa maxay urur?

Inta badan nolol maalmeedka waxa la isticmaalaa ereyo badan oo tilmaamaya walxo kooxa ah oo fududeeya kala soocidda kooxaha, sida:



Xayn ari ah



Xirmo ubax ah



Guuto ciidamo ah

Ereyada xayn, xirmo, guuto iwm waxa ay tilmaamayaan koox walxo ah. Xisaabtana wixii sameeya koox waxa lagu magacaabaa "Urur"

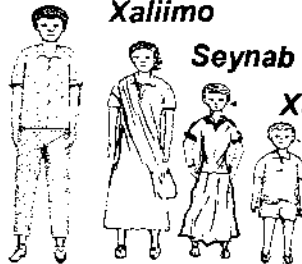
Kutirsanayaal

Guuleed

Xaliimo

Seynab

Xuseen



Sawirkan sare waa Reer Guuleed waxa ay sameeyaan urur qof kasta oo ka mid ah ururkan waa kutirsane, taas oo ah kutirsanayasha ururkan waa:

Guuleed, Xaliimo, Seynab, Xuseen.

Ururka ardayda fasalkaaga, arday kasta waa kutirsane. Magacyada maalmaha toddobaadka waa urur. Kutirsanayaashiisuna waa Sabti, Axad, Isniin, Talaado, Arbaco, Khamiis, Jimco.

Kutirsanayaasha ururka xarfaha ereyga (dugsi) waa d,u,g,s,i. erayga kutirsane summad ahaan waxa lo qoraa (€).

Tusaale ahaan

1. Sabti waa kutirsane ururka maalmaha toddobaadka.
Sabti ∈ ururka maalmaha toddobaadka.
2. d waa kutirsane ururka xarfaha erayga dugsi.
d ∈ ururka xarfaha erayga dugsi

Layli

I. Qor erayo kale oo ka duwan kuwa aan casharka ku soo sheegnay oo tilmaamaya walxo kooxo ah.

II. Qor kutirsaneyaasha ururrada hoos ku xusan:-

1. Ururka midabada calanka Soomaaliya.
2. Ururka degmooyinka gobolka Bay.
3. Ururka salaadaha faradka ah ee maalintiiba.
4. Ururka tirooyinka idil ee ka yar 15.
5. Ururka tirooyinka kisiga ee u dhexeeya 2 iyo 10.
6. Ururka dalalka Afrikada Bari.
7. Ururka Jaamacadda Carabta.
8. Ururka bilaha sanadka.
9. Ururka tirooyinka dhabanka ah ee u dhexeeya 5 iyo 13.
10. Ururka waddamada Jasiiradda Carabta.
11. Ururka tiirarka Islaamka.
12. Ururka tiirarka limaanka.

Siyaabaha loo qoro ururrada

Waxa jira labo hab oo loo qoro ururrada oo kala ah:

1. Habka tixidda kutirsanayaasha
2. Habka eray ku tilmaamidda

1. Habka tixidda

Urur kasta wuxuu leeyahay kutirsanayaal, habkan waa habka lagu taxo kutirsanayaasha ururka iyada labo kutirsane kasta la kala dhexgelinayo hakad si loo kala saaro, isla markaana kutirsaneyaasha lagu ooda yo laba tidic oo noocan ah { } oo astaan u ah erayga urur.

Si magac loo siiyo ururka waxa la adeegsan karaa shibane xaraf weyn ah sida

B,T,J,X,...

Tusaale

1. Ururka reer Guuleed

$A = \{ \text{Guuleed, Xaliimo, Seynab, Xuseen} \}$

Xaliimo A lakiin maryan (Ma aha kutirsane A).

2. Ururka xarfaha ereyga islaam

$B = \{ i, s, l, a, m \}$

$m \in (\text{Waa ku tirsane})B$ laakiin $t \notin (\text{ma aha ku tirsane}) B$

2. Habka eray ku tilmaamidda.

Ururradda qaar baa kutirsanayaashoodu badan yihiin oo ay dhibaato tahay in la taxo. Markaas oo kale waxa wanaagsan in aan u fiirsano xiriirka ka dhexeeya kutirsanayaasha ururka si aan u helno erayo lagu tilmaamo ururka.

Tusaale

Erayo ku tilmaan ururrada soo socda:

a) $B = \{ \text{Shabeelle, Jubba} \}$

= Ururka webiyada Soomaaliya.

b) $T = \{ 1, 2, 3, \dots \}$

= Ururka tirsiimo

c) $L = \{ \text{Sabti, Axad, Isniin, Talaado, Arbaco, Khamiis} \}$

= Ururka maalmaha todobaadka.

Layli

1. Tax ururada soo socda, una bixi magac:-

1. Ururka tirooyinka idil ee laba iyo toban ka yar

2. Ururka xarfaha labanlaabma ee xarfaha af Soomaaliga

3. Ururka dhinacyada laba-jibbaaranaha BTJX

4. Ururka magacyada faraha gacantaada

5. Ururka xarfaha erayga "Saynis"

6. Ururka dalalka afrikada Bari

7. Ururka shaqallada af-Soomaaliga

II. Haddii $D = \{s, m, l\}$ markaa ku buuxi meelaha banaan labada summadood ee kala ah $\{\epsilon, \emptyset\}$ mid ka mid ah, si aad u hesho weer run ah.

- | | |
|------------|------------|
| 1) m.....D | 5) l.....D |
| 2) s.....D | 6) c.....D |
| 3) h.....D | |
| 4) d.....D | |

III. Eray ku tilmaan ururrada soo socda:-

- 1) $B = \{\text{Baydhabo, B/hakabo, Diinsoor, Qansaxdheere, Berdaale}\}$
- 2) $T = \{1, 2, 3, 4, 5, 6, 7\}$
- 3) $J = \{\text{Laydi, Labajibbaarane, Koor, Qardhaas, Barbaroole}\}$
- 4) $X = \{1, 2, 3, 5, 7, 11, 13\}$
- 5) $Kh = \{\text{aa, ee, ii, oo, uu}\}$
- 6) $D = \{2, 4, 6, 8, 10, 12, 14, 16, 18\}$

Urur Maran

Haddii lagu weydiyo ururka dadka leh lix indhood, Jawaabtu waxa ay tahay ma jiraan dad lix indhood leh, taasoo micnaheedu yahay ururkaas ma laha kutirsanayaal.

Sidaas oo kale ka feker ururka tirooyinka idil ee u dhexeeya 5 iyo 6, waxa kuu muuqanaya in aysan jirin tiro idil oo u dhexeysa 5 iyo 6. Taasna micnaheeda waa ururkaas ma laha kutirsanayaal.

Labada urur ee aan kor ku soo sheegnay oo kale waxa lagu magacaabaa "urur maran" markii la rabo in loo qoro ururkaas habka tixidda kutirsanayaysha waxa aan u qoraynaa sidan $\{ \}$, summad ahaanna \emptyset

Haddaba

Urur maran waa ururka aan lahayn kutirsane loona qoro sidan $\{ \}$ ama \emptyset

Layli

I. Ururrada soo socda mid kasta hortiisa meesha ku habboon ku qor ✓

	Urur Maran	Urur aan Marneyn
b) Ururka tirooyinka dhabanka ee u dhexeeya 4,6	<input type="text"/>	<input type="text"/>
t) Ururka tirooyinka idil ee ka yar eber	<input type="text"/>	<input type="text"/>
j) { 0 }	<input type="text"/>	<input type="text"/>
x) Ururka ariga leh baalasha	<input type="text"/>	<input type="text"/>
kh) Ururka tirsiiimo ee u dhexeeya 1,9	<input type="text"/>	<input type="text"/>
d) Ururka maclimiinta xisaabta	<input type="text"/>	<input type="text"/>
r) Ururka saddex-xagalada leh 4 xaglood	<input type="text"/>	<input type="text"/>

II. Weer kasta oo run ah ku hor qor () tii Been ahna (x)

b) $5 \in \{5,1\}$

t) $0 \in ()$

j) $1 \notin \emptyset$

x) $\emptyset \in \emptyset$

III. Urur kasta ku hor qor tirada kutirsanayaasha:

b) $\{0,1\}$ kh) $\{\emptyset\}$

t) $\{0\}$ d) $\{2,4,6,8\}$

j) $\{\}$ r) Ururka macalimiinta xisaabta

x) $\{ \cdot \}$

Ururrada Isle'eg

Bal u fiirso labadan urur ee soo socda oo isbarbardhig:

$B =$ Ururka xarfaha erayga Axmed $= \{A,x,m,e,d\}$

$T =$ Ururka xarfaha erayga Xamed $= \{X,a,m,e,d\}$

Marka aan isbarbardhigno ururrada B iyo T waxa inoo muuqanaya in kutirsanayaashoodu isku mid yihiin in kasta oo horsanaantoodu kala geddisan tahay. Horsanaanta kutirsaneyaasha muhimad weyn malaha. Haddaba labada urur oo noocaas oo kale ah waxa aan oran karnaa waa ay isle'eg yihiin.

Tusaale 1

Ka soo qaad in X ay tahay ururka xarfaha erayga Salaax Y -na ay tahay ururka xarfaha "saalax" ma isle'eg yihiin labada urur X iyo Y ? Sheeg sababta ?

Furfuris

$X = \{S,a,l,aa,x\}$

$Y = \{S,aa,l,a,x\}$

$X = Y$

Maxaa yeelay kutirsane kasta oo X waa kutirsane Y . Kutirsane kasta oo Y -na waa ku tirsane X . Sidaas awgeed $X = Y$

Labada urur A iyo B waa isle'eg yihiin haddii A iyo B ay ka kooban yihiin kutirsanayaal isku mid ah.

Ururrada Isu-dhigma

Haddii $M = \{b, t, j\}$ markaa tirada ku tirsanayaasha M waa 3 sidaas oo kale haddii $N = \{1, 2, 3\}$ marka tirada kutirsanayaasha N waa 3 taas oo ah:

Tirada kutirsanayaasha $M =$ tirada kutirsanayaasha N .

sidoo kale:

Tirada kutirsanayaasha {Noor, Axmed} = tirada kutirsanayaasha {Yusuf, Jamac}.

Hadaba

Labo urur kasta oo tirada kutirsanayaashooda isla'eg yihiin waxaan oran karnaa waa ururro isu-dhigma summad ahaana waxa loo qoraa \cong

Tusaale 1

Ka soo qaad in $H = \{X, i, s, aa, b\}$, $U = \{1, 2, 3, 4, 5\}$

b) ma isudhigmaan H iyo U ? Waayo?

t) Ma isle'eg yihiin H iyo U ? Waayo?

Furfuris

Mar haddii $H = \{X, i, s, aa, b\}$

$U = \{1, 2, 3, 4, 5\}$

Markaa $H \cong$ (waa ay u dhigantaa) U waayo tirada ku tirsanayaashoodu waa isle'eg yihiin lakiin $H \neq$ (ma le'eka) U waayo labada urur isku kutirsanayaal ma aha.

Tusaale 2

Haddii $X = \{b, t, j\}$

$Y = \{4, 6, 8, 10, 12\}$

Ma isu dhigmaan X iyo Y

$X \not\cong$ (uma dhiganto) Y

Tusaale 3

Ka soo qaad $B = \{2,3,5,8\}$, $T = \{8,3,2,5\}$

- b) Ma isu dhigmaan B iyo T? Waayo?
 t) Ma isle'eg yihiin B iyo T Waayo?

Furfuris

b) Marka $B = \{2,3,5,8\}$
 $T = \{8,3,2,5\}$

$B = T$ maxaa yeeley B iyo T
 Kutirsanayaashooda ayaa isle'eg.

t) Tirada kutirsanayaasha $B = 4$
 " " " $T = 4$

$\therefore B = T$

Tusaalaha dambe waxa uu muujinayaa in:

Labo urur kasta oo isle'eg in ay isu dhigmaan, laakiin, labo urur kasta oo isu dhigmaa in aanay isle'ekayn.

Layli

I. Ka soo qaad in $X = \{x, a, m, a, d, u\}$
 $Y = \{x, aa, m, u, d\}$
Ma isle'eg yihiin X iyo Y?

II. Meelaha Bannaan ku buuxi mid ka mid ah sumadaha (\equiv ama \neq) si weertu run u noqoto.

- b) $\{2,3\}$ $\{3,2\}$
- t) $\{r,s,m,n\}$ $\{d,n,m,s,r,c\}$
- j) $\{ \quad \}$ $\{0\}$
- x) $\{641\}$ $\{6,4,1\}$
- kh) $\{aa,ee,ii,oo,uu\}$ Ururka shaqal dheer
- d) $\{b,d,r,g,l,m,n\}$ Ururka xarfaha labanlaabma

III. Ka soo qaad in $F = \{r,y,b,t,x\}$
 $H = \{1,3,5,7,9\}$

Ma isu dhigmaan F iyo H

IV. Ka soo qaad in K uu yahay ururka xarfaha erayga Saalim M-na in ay tahay ururka xarfaha erayga Maxamuud:

- b) Tax kutirsanayaasha K iyo M
- t) Ma isudhigmaan K iyo M? Waayo?
- j) Ma isle'eg yihiin K iyo M? Waayo?

V. Ku buuxi meelaha bannaan (\equiv ama \neq) si weertu run u noqoto:

- b) $\{3,6,9\}$ $\{2,3,5\}$
- t) $\{21\}$ $\{1,20\}$
- j) $\{x,y,c,l\}$ $\{x,y,c\}$
- x) $\{\triangle, \square, \text{---}\}$ $\{\text{---}, \square, \triangle\}$
- kh) $\{\square, \text{stick figure}, \triangle, \text{cube}\}$ $\{\square, \triangle, \text{stick figure}\}$

MAHADNAQ

Xarunta Horumarinta Waxbarashada ee UNESCO waxa ay u mahad celinaysaa:

Qorayaasha Buugga

1. Aadan Maxamed Macallin
2. Mukhtaar Qaasim Aadan
3. Cismaan Sh. Aadan Xaydar
4. Cabdulqaadir Cabdulkariim Maxamed
5. Ibraahim Jeylaani Maxamed
7. Rashiid Ismaaciil Xuseen

Madaxa Qaybta KMM (A.V.A)

Saciid Axmed Xuseen (Baaffo)

Sawirrada iyo Lay-outka

1. Maxamed Cali Sh. Saciid
2. Maxamed Aadan Guuleed
3. Cabdullaahi Maxamed Gacal
4. Maxamuud Siidow Maxamed

Buugga waxaa garaacay

1. Xuseen Maxamed Cabdullahi

Waxa kale oo ay Xarunta Waxbarashada UNESCO u mahad celinaysaa guddigii sida weyn isaga xilsaaray xagga talo bixinta iyo tifaftiridda buuggan.

Madaxa Manhajka Dugsiga Dhexe

Cali Caraaye Caddow



United Nations Educational, Scientific
and Cultural Organization



XISAAB

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