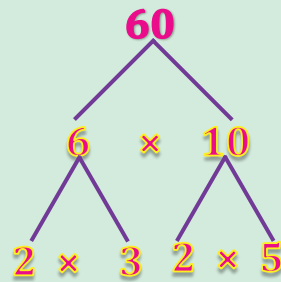


CUTUBKA 2aad



QEYBSANAANTA TIROOYINKA IDIL

Maxsuulka Cutubka:

Cutubkan dabadii, ardaydu waxay awoodi doonaan;

- *kala saaridda u qeybsami ogida tirooyinka idil ay u qeybsamayaan 2, 3, 4, 5, 6, 8, 9 iyo 10.*
- *kala saaridda tirooyinka mutaxan iyo kuwa farcan.*
- *qoridda hab dhiska isiraynta mutaxan ee tirada idil ee lagu siiyay.*
- *kala soocidda isir weynaha ay wadaagaan labo ama saddex tirooyinka idil ee leh hal ama labo god.*
- *kala soocidda dhufsane yaraha ay wadaagaan labo ama saddex tirooyinka idil ee leh hal ama labo god.*

Tusmooyinka ugu muhiimsan:

2.1 Nuxurka u Qeybsanaanta

2.2 Dhufsanayaasha iyo Qeybshayaasha

Hubin

Soo koobid

Layliska nakhtiinka ah

HORDHAC

Cutubka 2^{aad} dhexdiisa waxaad ku baran doontaan u qeybsanaanta tirooyinka, tijaabinta u qeybsanaanta tirooyinka idil ee 2, 3, 4, 5, 6, 8, 9 iyo 10. waxaa garab socda ood baraneysaan dhufsanayaasha iyo isirada tirooyinka idil iyo sidii aad u raadin lahaydeen isir weynaha iyo dhufsane yaraha ay wadaagaan labo ama saddex tirooyinka idil ee leh hal ama labo god.

2.1 NUXURKA U QEYBSANAANTA

Ku furitaanka su'aal/masalo

Maalin ka mid ah ayaamaha todobaadka ayuu Xasan qorsheystay in uuku beero 144 geed gudaha dusigiisa oo kuwa bixiya midhaha ah. Imisa wado ayuu xasan ku beeri karaa geedaha isaga oo raacaya qaabka(foomka) laydiga?

Shaqo Kooxeed 2.1

Fiiri ururka ardayda ee fasalkaada. Waa imisa ardayda fasalkaada? Ma suurto galbaa in ardayda dhammaantood laga dhigo min labo kooxood? Min saddex kooxood? Min 5 kooxood? Ku falanqeeya su'aalahan idinkoo ah min 3 ilaa 5 kooxood. Waa maxay soo gunaanad-kaaga ku saabsan qeybsanaanta ardayda fasalkaaga?

Hadda si taxadar leh u eeg shaxda 1 ee hoose.

Tijaabooyinka u qeybsanaanta

Tirada idil waxay u qeybsami tiro kale haddii qeybta tirooyinka ay yihiin tiro tirsiiimo oo ka weyn 1 hadhaaguna yahay 0. Tusaale, 42 waxay u qeybsami 6. waxaynu kaloo dhihi karnaa, 6 waa qeybshaha 42, sababtoo ah $42 \div 6 = 7$.

Weydiinta haddii b ay u qeybsanto tiro kale oo ah t , waxay la micno tahay b loo qeybiyay t (taas oo ah $b \div t$) mana laha wax hadhaa ah (ama hadhaageedu waa 0).

Hawlgalka 2.1

Qaar ka mid ah tirooyinka tirsiiimo (taxa 1 ^{aad})	Dhufsanaha 2 (taxa 2 ^{aad})	Dhufsanaha 3 (taxa 3 ^{aad})	Dhufsanaha 5 (taxa 4 ^{aad})	Dhufsanaha 9 (taxa 5 ^{aad})
1	2	3		9
2	4		10	18
3		9	15	
4	8		20	36
5	10	15		45
6		18	30	54
10	20		50	90
18	36	54		
26		78	130	234
44	88		220	39

Si taxadar leh u eeg tirooyinka sida ay u habaysan yihiin joogtax kasta.

- b** Waa maxay boosaska hal-godlaha ee tiro kasta oo joogga taxa 2^{aad} ah? Maxay kala yihiin godadkaasi? Maxaad dhihi kartaa u qeybsanaanta tirooyinka ay u qeybsamaan 2?
- t** Hadda si taxadar leh u fiiri tirooyinka joogga taxa 3^{aad}. Soo qaado tirooyinka qaar ka mid ah; iskudar gododka midwalba iyo u qeybi wadartooda 3. Wadar walba ma u qeybsantaa 3? Haddey sidaa tahay, waa maxay waxaan dhihi karnaa u qeybsanaanta tirooyinka ay u qeybsamaan 3?
- j** Sidoo kale bal fiiri tirooyinka hal-godlaha ee joogga taxa 4^{aad}. Maxay yihiin gododka 2 Maxaan dhihi karnaa tirooyinka u qeybsama 5?

Hadda jawaabahaaga hawlgalka sare ku hubi xeerarkan soo socda.

Xeerka 1^{aad}

Jooga taxa 2^{aad} wuxuu ka kooban yahay natiijada dhufsanaha 2. tirada booska hal-godle kasta waa 0, 2, 4, 6, 8. waxaad arki kartaa tira walba oo idil iney u qeybsanto 2 haddii tirada booska hal-godlaha u yahay 0, 2, 4, 6 ama 8.

Xeerka 2^{aad}

Hadda si taxadar leh u eeg maxsuulka dhufsanaha 3 ee ku jira joogga taxa 3aad, waxaad eegi kartaa wadarta godadka tiro walba in ay u qeybsami karto 3. Tusaale; wadarta godadka ku jira 54 (kuwaas oo ah $5 + 4 = 9$) waxay u qeybsami 3.

Sidaa darteed, tiro walba waxay u qeybsantaa 3, haddii wadarta godadka tiradaa ay u qeybsami 3.

Xeerka 3^{aad}

Fiiri joogga taxa 4^{aad} “Dhufsanaha 5” Booska hal-godlaha tiro walba oo ka mid ah taxa waa midkood 0 ama 5.

Sidaa awgeed, tiro idil oo kasta waxay u qeybsantaa 5 haddii booska hal-godlaha ee tirada u yahay midkood 0 ama 5.

Xeerka (Tijaabada) qeybiyaasha 2, 3, ama 5

Si aan u tijaabino u qeybsanaanta tirada idil ee qeybiyaasha 2, 3 ama 5.

- i Haddii hal godlaha tiradu uu yahay 0, 2, 4, 6 ama 8, kadib tiradu waxay u qeybsantaa 2.
- ii Haddii wadarta gododka tiradu ay u qeybsanto 3, kadib tiradu waxay u qeybsantaa 3.
- iii Haddii tirada hal godluhu u yahay 0 ama 5, kadib tiradu waxay u qeybsantaa 5.

Xusuusnaw 0, 2, 4, 6, 8 in ay yihiin gododka dhaban; iyo 1, 3, 5, 7, 9 ay yihiin gododka Kisi. Waxaan kalsoon ku qeexi karnaa xeerka 1^{aad} ee sare “hadey tiradu tahay” dhaban, kadib waxay u qeybsantaa 2.

Tusaale 1: 85 ma u qeybsantaa 2, 3 ama 5?

Furfuris:

- ◆ 85 u ma qeybsanto 2, sababtoo ah booska hal-godluhu ma aha dhaban.
- ◆ 85 uma qeybsanto 3, sababtoo ah wadarta gododka:
 $8 + 5 = 13$; islamarkaana wadarta gododka ku jira 13 waa $3 + 1 = 4$, taas oo u qeybsamin 3.
- ◆ 85 way u qeybsantaa 5, sababtoo ah booska hal-godlihiisu waa (5).

Bal markale aan eegno shaxda 1 ee kore. Shaxdan gudaheeda, qaar ka mid ah tirooyinka ayaa waxay ka muuqdaan labaduba joogga taxa “dhufsanaha 2” iyo “dhufsanaha 3”. Tusaale tirooyinka 18 iyo 54 ba waxay ka muuqdaan labada taxba

kuwaas iyo tirooyinka kale ee ku jira labadaa taxba waxay u qeybsamaan 6. ($18 \div 6 = 3$; $54 \div 6 = 9$) sababtoo ah $6 = 2 \times 3$, tiro walba oo u qeybsanta 6, waa in ay u qeybsantaa 2 iyo 3 ba. Tusaale 132 waxay u qeybsantaa 2 iyo 3.

Sidaa awgeed, 132 waxay u qeybsami b.

Taxa “dhufsanaha 9” ee shaxda 1 sare, wadarta gododka tiro walba waxay u qeybsantaa 9. Tusaale wadarta gododka 36 waa $3 + 6 = 9$, taas oo u qeybsanta 9, tani waxay noqon run markii loo eego dhammaan tirooyinka ku jira taxa 5^{aad}. Sidaa darteed, tiro walba waxay u qeybsantaa 9, haddii wadarta gododka tirada ay u qaybsanto 9.

Ogsoonaw, maadaama 0 ay tahay dhaban, dhammaan tirooyinka tirsiiimo ee ku dhammaada 0 waxay u qeybsamaan 2. Waxay kaloy u qeybsamaan 5 sababtoo ah dhammaadku waa 0. Tirooyinkaasi waxay kaloy u qeybsamaan 10. Waxay ka muuqdaan taxaha “dhufsanaha 2” iyo dhufsanaha 5”.

Xeerka u qeybsanaanta 6, 9, ama 10

Tijaabinta qeybsanaanta tirooyinka idil ee 6, 9 ama 10.

- 1 **Xeerka 4^{aad}** Haddii tiro ay u qeybsanto 2 iyo 3. tiradu waxay u qeybsantaa 6.
- 2 **Xeerka 5^{aad}**, haddii wadarta godadku ay u qeybsanto 9, kadib tiradu waxay u qeybsantaa 9.
- 3 **Xeerka 6^{aad}**, Haddii booska koowaadku yahay 0, tiradu waxay u qeybsantaa 10.

Tusaale 2: 720 ma u qeybsantaa 6, 9, ama 10? Sabab?

- ◆ 720 wey u qeybsantaa 6, maadaama $720 \div 6 = 120$ ay u qeybsanto 2 iyo 3.
- ◆ 720 wey u qeybsantaa 9, maadaama $7 + 2 = 9$, taa oo u qeybsami 9.
- ◆ 720 waxay u qeybsantaa 10, maadaama booska halgodluhu uu yahay 0.

Laylis 2.1

- 1 Tiro walba ma u qeybsantaa 2? 3? 5? Sharaxaad ka bixi;

b	25	t	30	j	73	x	346	kh	1034
----------	----	----------	----	----------	----	----------	-----	-----------	------
- 2 Tus iney tiro walba ay u qeybsanto 2, 3, ama 5 iyo in kale.

b	3660	t	2670	j	3998	x	4998
kh	4815	d	1845	r	5280	s	7275

- 3** Tiro walba ma u qeybsantaa 6? Sabab?
- | | | | | | | | | | |
|----------|-----|----------|-----|----------|-----|----------|-----|-----------|-----|
| b | 108 | t | 333 | j | 254 | x | 444 | kh | 900 |
|----------|-----|----------|-----|----------|-----|----------|-----|-----------|-----|
- 4** Tiro walba oo soo socota ma u qeybsantaa 9? Sabab?
- | | | | | | | | |
|-----------|------|----------|-----|----------|-----|----------|-----|
| b | 108 | t | 801 | j | 376 | x | 414 |
| kh | 1152 | | | | | | |
- 5** Tiro walba oo soo socota ma u qeybsantaa 10? Sabab?
- | | | | | | | | | | |
|----------|-----|----------|-----|----------|-----|----------|-----|-----------|------|
| b | 233 | t | 330 | j | 875 | x | 607 | kh | 1770 |
|----------|-----|----------|-----|----------|-----|----------|-----|-----------|------|
- 6** Go'aanso tirooyinkan soo socda in ay u qeybsamaan 6,9, ama 10 iyo in kale.
- | | | | | | | | |
|-----------|------|----------|------|----------|------|----------|------|
| b | 4920 | t | 4896 | j | 6993 | x | 4998 |
| kh | 3780 | d | 5555 | r | 5700 | s | 7880 |
- 7** Jamaal iyo afar saaxiibadii ah waxay qorsheysteen iney ordaan 82km. Ma suurto galbaa orod yahan kaste in ay ordaan tiro (km) idil oo isku mid ah iney ordaan?
- 8** Marlabad waxay leedahay ayaa wuxuu leeyahay kabadh balaciisu uu yahay 36cm. waxay rabtaa iney ku isticmaasho buugaagta xisaabta bug walbana buuridiisu ay tahay 2cm. Ma suurto galbaa in ay kabadhka ka buuxiso buugaagta? Sabab? Miyey kartaa in kabadhka si dhameystiran ay ooga buuxiso mug dhan 3cm? sabab?
- 9** Baandhiga baanbeyda booliska ayaa waxay leeyihiin 175 xubnood?
- | | |
|----------|---|
| b | bandhigu ma u feyli karaan min laba qof iyada oo wax dheeri ah jirin? |
| t | Ma noqon karaan 3 fiilo? |
| j | Ma noqon karaan 5 fiilo? Sabab u yeel? |

Xeerka u qeybsanaanta ee 4 ama 8

Waxaa ku xigta, waxaynu baran doonaa tijaabinta tirooyinka idil ee u qeybsama 4 ama 8. Si fudud waxaad utijaabin kartaa qeybsanaanta hal-godlaha iyo labo godlaha inagoo tirooyinka idil u qeybineyna 4 ama 8. Tusaale, tijaabinta 74 iney u qeybsanto 4 iyo inkale, waxaynu 74 u qeybin 4.

$$74 \div 4 = 18, \text{ hadhaa } 2.$$

Sidaa awgeed, 74 uma qeybsanto 4. sababtoo ah hadhaagu ma aha 0 (hadhaagu waa 2) laakiin haddii 84 aad u qeybisid 4, waxaynu heleynaa 21 hadhaaguna yahay 0. Sidaa awgeed, 84 waxay u qeybsantaa 4.

Hadda su'aashu waxay tahay sidaad u sheegi lahayd tirooyinka idil ee haysta godod badan iney u qeybsamaan 4 ama 8 iyo in kale, adoon u qeybineynin?

Waxaad ku baran doontaa cashiradan soo socda.

Marka hore bal aan eegno tijaabooyin muhiim ah oo ku saabsan taranta u qeybsanaanta iyo wadarta ama faraaq tirooyinka qeybsama.

i Taranta qeybsanaanta

Xusuusnaw, $4 \times 5 = 20$, tirooyinka 4 iyo 5 waxaa loogu yeedhaa isiro ama qeybshe. 20 kana waxaa loogu yeedhaa taranta 4 iyo 5. Waxaan kaloo dhihi karnaa 20 waxay u qeybsantaa 4 iyo 5. Ogsoonaw, taranka “ 15×14 ” waxay u qeybsantaa labadaba 15 iyo 14.

Waxaa kalood ku hubin kartaa in uu tarantu u qeybsamo 5 iyo 7 iyada oo la iskudhufanin tirooyinka.

$$\begin{aligned} 15 \times 14 &= (5 \times 3) \times 14 & \text{iyo} & 15 \times 14 = 15 \times (2 \times 7) \\ &= 5 \times (3 \times 14) & & = (15 \times 2) \times 7 \end{aligned}$$

Taranka “ 15×14 ” ma aha iney u qeybsanto oo keli ah qeybshe yaashooda 15 iyo 14; ee waxaa kaloo jira qeybshe-yaal kale, tusaale, waxay kaloo u qeybsamaan 2, 3, 5. Marka Hadda waxaynu sheegi qeybsanaanta taranta sida soo socota.

U Qeybsanaanta taranta:

Haddii isirka tirada m ay u qaybsanto ugu yaraan hal qeybshe tirada 2aad n (Markey $m > n$), kadib m waxay u qeybsantaa n .

Tusaale 3: 900 ma u qeybsantaa 4? Sabab?

Furfuris: $900 = 9 \times 100$

Waxad ogtahay 100 in ay u qaybsanto 4 sida 4×25

Sidaa darteed, 900 waxay u qeybsantaa 4. (qeybsanaanta taranka)

ii U Qeybsanaanta wadarta/faraqa, fiiri shaxdan soo socota

Shaxda 2:

b (taxa 1 ^{aad})	t (taxa 2 ^{aad})	b Ma u qeybsama 3? (taxa 3 ^{aad})	t ma u qeybsantaa 3 (taxa 4 ^{aad})	b + t ma u qeybsantaa 3 (taxa 5 ^{aad})
12	5	Haa	Maya	Maya
17	20			
15	27			
48	54			

Hawlgalka 2.2

Intaad koobiyeysid ama roгатid shaxda 2 ee kore kadibna buuxi meelaha banaan. Si taxadar leh u fiiri jawaabaha joogga taxa 5^{aad} adoo la xidhiidhinaya joogga taxa 3^{aad} iyo joogga taxa 4^{aad}, goormey jawaabta taxa 5^{aad} ay noqotaa haa? Midaasi ma goortii wadarta labada tiro ay u qeybsanto 3 miyaa?

F.G: Qeybsanaanta wadarta: Haddii labo tirooyinka idil ah a iyo b ay u qeybsamaan tiro tirsimo n , kadib $a + b$ waxay u qeybsami n .

Tusaale 4: 936 ma u qeybsantaa 4?

Furfuris: Si aan u hubino, Marka hore aan cadeyno 936 in ay tahay labo tiro oo la iskudaray, midda 1^{aad} ay tahay dhufsanaha 100 iyo tan labaadna ay ka yartahay 100.

$$936 = 900 + 36 = (9 \times 100) + 36$$

900 waxay u qeybsantaa 4 maxaa yeeley $900 = 9 \times 100$ iyo 100 waxay u qeybsantaa 4. Waxaad si fudud u aragtaa in ay 36 u qeybsanto 4, sababtoo ah $36 = 4 \times 9$.

Sidaa awgeed, 936 waxay u qeybsantaa 4 (qeybsanaanta wadarta).

Hawlgalka 2.3

Maxaad ka fahantay tusaalaha 4 ee kore? Waa midkee gadaal biirayaasha midka ugu tilmaan fiican ee tijaabinta u qeybsamida 4, ma ka koobaad mise midka 2^{aad}? Sabab?

Haddii tiro idil lagu qeexo sida wadarta labo gadaal birayaal, oo midka 1^{aad} yahay dhufsanaha 100 iyo midka 2^{aad} u ka yaryahay 100, maadaama dhufsanaha 100 kaste uu u qeybsamo 4, gadaal biiraha 1^{aad} wuxuu u qeybsamaa 4. Laakiin gadaal biiraha 2^{aad} wuxuu ka kooban yahay labada god ee ugu danbeeya. Haddii gadaal biiraha 2^{aad} u isna u qeybsamo 4, kadib waxaynu odhan karnaa tirada nala siiyay waxay u qeybsantaa 4; haddii kale uma qeybsanto 4. si aan u tijaabino in tirada idil ay u qeybsanto 4 iyo in kale;

Waxaad u baahan oo keli ah in aad tijaabisid gadaal biiraha 2^{aad}. (kaas oo ka kooban labada god ee ugu danbeeya) in uu u qeybsamo 4.

Macno ahaan, si aan u tijaabino tiradu in ay u qeybsanto 4, ta loo baahan yahay in aad ka walbahaarto waa labada god ee u danbeeya! Markaan soo gaabsano, waxaad ku sharxi tijaabada u qeybsanaanta 4 sidan soo socota;

Tijaabada u qeybsamida 4:**Xeerka 7^{aad}**

Tiradu waxay u qeybsantaa 4 haddii tirada sameysantay labada god ee u danbeeya ay u qeybsanto 4.

Tusaale 5: Tiro walba ma u qeybsantaa 4? Sabab u yeel.

b 4648

t 12622

Furfuris:

b 4648 waxay u qeybsanta 4 sababtoo ah 48 waxay u qeybsantaa 4

t 12622 uma qeybsanto 4 sababtoo ah 22 uma qeybsanto 4.

Sidoo kale, waxaynu waddadan mid la mid ah u mari tijaabinta u qeybsamida 8. Marka hore tirada idil waxaad ku qeexi sida isku darka labo gadaalbiire, oo midda hore ay tahay dhufsanaha 1000 iyo tan labaadna ay ka yartahay 1000. Haddii tirada lagu qeexo waddadaa, waxaad taqaanaa tirada 1^{aad} iney u qeybsami 8 sababtoo ah waa dhufsanaha 1000 haddii gadaal biiraha labaadna uu u qeybsamo 8, kadib waxaynu odhan karnaa tiradaasi waxay u qeybsantaa 8.

Tusaa 6: Tirada 2640 ma u qeybsantaa 8? Sabab u yeel.

Furfuris: $2640 = 2000 + 640 = 2 \times 1000 + 640$

2000 waxay u qeybsantaa 8, waayo waa dhufsanaha 1000;

maadaama $1000 = 125 \times 8$

640 waxay u qeybsantaa 8, waayo

$640 = 8 \times 80$

Sidaa awgeed, 2640 waxay u qeybsantaa 8.

Xeerka 8^{aad}: Tijaabada u qeybsamida 8

Tiradu waxay u qeybsami 8 haddii tirada ka abuuranta saddexda god ee oogu danbaysa ay u qeybsanto 8.

Laylis 2.2

1 Go'aami $x + y$ ay u qeybsanto z iyo in kale. Sabab u yeel.

b $x = 600, y = 78, z = 4$

t $x = 78, y = 36, z = 6$

j $x = 21, y = 220, z = 7$

- 2** Dheh Run ama been
b 5 waa qeybshaha $65 + 70$ **t** 4 waa qeybshaha $240 + 38$.
j 3 waa qeybshaha $220 + 25$.
- 3** Tiro kasta oo soo socota ma u qeybsantaa 4? Sabab?
b 5716 **t** 724 **j** 4075
x 3120 **kh** 37952
- 4** Ka bixi 5 tusaale tirooyinka u qeybsama 4. Tiro kaste waa in ay lahaato 5 god.
- 5** Ka soo qaad 7×32 in ay tahay tiro idil oo leh afar god. Waa maxay godka loo baahan yahay in uu badalo * sidaa darteed, ay tiradu noqoto mid u qeybsanta 4?
- 6** Tirooyinkan soo socda ma yihiin kuwo u qeybsama 8? Sabab?
b 27320 **t** 45776 **j** 3056
x 73641 **kh** 53128
- 7** Tiro idil oo leh 5 god 5312^* ayaa waxay u qeybsantaa 8. Godka muxuu u taagan yahay?
- 8** Go'aanso tirooyinkan soo socda in ay u qeybsamaan 4 ama 8 iyo in kale.
b 918 **t** 2470 **j** 1700
x 2348 **kh** 16454
- 9** Intaad koobiyeysid dhammeystir shaxdan.
- | | | | | | | | |
|--|---|---|---|---|---|---|----|
| Tiro walba oo tirsiiimo kuna dhammaata | 0 | 2 | 4 | 5 | 6 | 8 | 10 |
| Waxay u qeybsantaa | | | | | | | |
- 10** Go'aanso tirooyinkan soo socda midka u qeybsama
i 10 **ii** 100 **iii** 2 **iv** 5?
b 120 **t** 159 **j** 6,400 **x** 24,030
kh 8,775 **d** 56,040 **r** 780,000
- 11** 120 ardayo ayaa waxay tahay in ay isu qeybiyaan kooxo isle'eg si ay shaqo u qabtaan. Raad si walba oo ay suurtagal u noqoto in ay ardaydu isuqeybiyaan kooxo.
- 12** Maktabada dugsi oo cusub ayaa wuxuu haystaa 3,488 oo buugaag ah. Masuulka maktabada ayaa wuxuu rabaa in uu dhigo qol walba buugaag isku nooc ah oo u dhaxeeya 500 ilaa 1000. Imisa qol ayuu maktabadu yeelan karaa?

2.2 DHUFSANAYAASHA IYO ISIRADA

Hawlgalka 2.4

Si fiican oo taxadar leh u akhri xogta hoos lagugu siiyay.

Warshad saabuun ah ayaa waxay soo saartaa labo nooc oo saabuuna'ah. Nooca koobaad qaabkeedu waa laydi ahaan iyo waxay leedahay dhinacyada 10mm, 5mm iyo 3mm. nooca labaadna wuxuu leeyahay qaabka saddex jibaaranaha iyo dhererka cidhifkiisu uu yahay 5mm.

Warshadu waxay rabtaa saabuun nooc walba'ah in ay ku xidho sanduuqyo (kaartoono) kala duwan oo dhinacyaduna yihiin 30cm, 20cm, 15cm.

- b** Ma suurto galbaa in kaartoonada si dhammeystiran looga buuxiyo saabuunta qaabkeedu yahay laydiga?
- t** Ma la karaa kaartoonka si dhammeystiran in looga buuxiyo saabuunta qaabkeedu yahay saddex jibaaranaha?

Jawaabaha su'aalahaas waxay u baahan yihiin fahanka dhufsanayaasha iyo isirada ama qeybshe-yaasha. Cutub-yarahan waxaad ku baran doontaa dhufsanayaasha iyo qeybshe yaasha tirooyinka idil.

2.2.1 Nakhtiinka Dhufsanayaasha iyo Isirada

Iskudhufasho kasta tirooyinka la isku dhufanayo waxaa loogu yeedhaa **Isiro** natiijadana waxaa loogu yeedhaa **Taran**. Isirku waa tiro lagu dhufanayo tiro kale si loo helo taranta.

Isir **Isir** **Taran**

$$2 \times 3 = 6$$

Iskudhufashadan dhabta ah waxaynu ka sameyn karnaa labo u qeybi ah:

$$6 \div 2 = 3 \text{ iyo } 6 \div 3 = 2$$

Sidaa awgeed, 6 waxay u qeybsami kartaa 2 iyo 3. waxaynu dhihi karnaa 2 iyo 3 waa isirada ama (qeybshaha) 6. Waxaa kaloon dhihi karnaa 6 waa dhufsanaha 2 iyo 3.

F.G	d waa dhufsanaha c c waa isirka c c waa qeybshaha d	Macnaheedu	Waxaa jira tiro idil n taas oo ah: $d = c \times n$
-----	---	------------	--

Tusaale 1: 35 waa dhufsanaha 7 sababtoo ah $7 \times 5 = 35$.

5 iyo 7 waa isirada 35, sababtoo ah $5 \times 7 = 35$.

6 ma aha isirka 35, sababtoo ah ma jiro tiro idil oo intii lagu dhufto 6 nasiineysa 35

(Tusaale, $5 \times 6 = 30$ iyo $6 \times 6 = 36$).

Dhufsanaha tiro idil waa taranka tiradaa iyo tiro idil.

Waxaan heleynaa dhufsanayaasha tirada n inaga oo ku dhufanna n tiro idil.

Tusaale ahaan: si aan u helno dhufsanayaasha 4, waxaynu 4 ku dhufan tiro kasta oo idil.

Shaxda 3:

Tiro idil	Dhufsanayaash 4
0	$0 \times 4 = 0$
1	$1 \times 4 = 4$
2	$2 \times 4 = 8$
3	$3 \times 4 = 12$
4	$4 \times 4 = 16$
5	$5 \times 4 = 20$
...	...
15	$15 \times 4 = 60$
16	$16 \times 4 = 64$
...	...

Shaxda 3 ee kore wey socon kartaa xad la'aan. Sidaa awgeed dhufsanayaasha 4 waxay yihiin 0, 4, 8, 12, 16, 20,

F.G: a waa dhufsanaha b waxay la micno tahay waxa jira tiro taas oo ah.

$a = b \times n$. (a, b iyo n ay yihiin tirooyin idil).

Hadeyn jirin tiro idil n kadhigeysa qaaciidada $a = b \times n$ run, kadib a dhufsane uma aha b.

Tusaale, 18 uma aha dhufsane 5, sababtoo ah ma jirto tiro idil n oo kadhigeysa $5 \times n = 18$ run. ($3 \times 5 < 18 < 4 \times 5$) ado ka duulaya kor, waxaad soo saari kartaa qaar ka mid ah dabecadaha dhufsanayaasha sidan soo socota;

1 Tiro kasta waa dhufsanaha 1.

Tusaale: $7 = 1 \times 7$, $13 = 1 \times 13$, i.w.m

2 Tiro kasta waa dhufsanaha laftigeeda.

Tusaale: $5 = 5 \times 1$, $17 = 17 \times 1$, i.w.m

3 Ebar waa dhufsanaha tiro walba.

Tusaale: $0 = 8 \times 0$, $0 = 73 \times 0$, i.w.m

Tiro walba oo idil ka sareysa 1 waxay leedahay ugu yaraan labo qeybsheyaal oo kala duwan, waxaa lagu magacaabaa 1 iyo qudhigeeda. [dabeecadaha 1 iyo 2 ee kore].

Ebar (0) looma qaato qeybshe ahaan laakiin tiro walba (waxaan ka'ahayn 0) waa qeybsaha 0 [dabeecada 3 ee kore].

Laylis 2.3

1 Go'aami 42 iney tahay iyo in kale dhufsanaha 7, 6, 5 sabab u yeel,

2 Weedhahan soo socda keebaa run ah? Kaabaa been ah? Sabab u yeel?

b 12 waa dhufsanaha 2 **t** 18 waa dhufsanaha 3

j 35 waa dhufsanaha 5 **x** 52 waa dhufsanaha 4

kh 62 waa dhufsanaha 8.

3 Go'aami in ay tahay iyo in kale;

b 24 waa dhufsanaha 4 **t** 74 waa dhufsanaha 4

j 100 waa dhufsanaha 4. Sabab u yeel mid walba

4 **b** Raadi dhufsanayaasha 3 ee u dhaxeeya 47 iyo 62.

t Raadi dhammaan tirooyinka u dhaxeeya 35 iyo 47 oon ahayn dhufsanayaasha 3.

5 Hubi iney tahay iyo in kale b dhufsanaha t

b	42	28	9	14	27	0	1	13	0	2
t	7	6	0	14	3	18	9	1	0	12

6 Tirooyinkan 56, 42, 36, 81, 63, 87, kuweebaa ah

b dhufsanayaasha 9? **t** ma aha dhufsanayaasha 9?

j dhufsanayaasha 7? **x** ma aha dhufsanayaasha 7?

kh Dhufsanayaasha labadaba 9 iyo 7?

7 Hubi in ay b tahay isirka a iyo in kale;

b	5	7	8	1	17	0	4	6	9	10
t	15	77	65	10	17	8	0	72	3	100

8 Tus isirada ay leeyihiin dhammaan tirooyinkan soo socda.

b	16	t	15	j	18
x	55	kh	81	d	23

9 Intaad rogatid dhameystir shaxdan soo socota

	x	y	$x \div y$	$y \div x$	y ma u tahay dhufsane x ?	x ma u tahay dhufsane y ?
b	45	9	5	Xalin ma'laha	Haa	Maya
t	80	4				
j	30	30				
x	12	0				

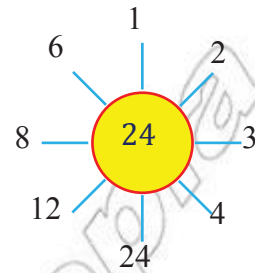
2.2.2 Tirooyinka Mutaxan iyo Kuwa Farcan iyo habka isirada Mutaxan

Hawlgalka 2.5

Ku rogo buugaada kadibna dhameystir shaxdan soo socota.

Tiro	Isiro	Tirada Isirada
1	1	1
2	1, 2	2
3	1, 3	2
4	1, 2, 4	3
5		
6		
7		
8		
9		
10		
11		
12		

Waa suurto gal in lataxo dhammaan isirada tirada idil ee lagu siiyay. Tusaale, si aad u heshid isirada 24 waxaad u baahan in aan raadino dhammaan tirooyinka lamaan ee tarantoodu noqonayo 24. si aan u sameyno sidan waxaad isticmaali karnaa jaantus, marmarka qaarkood loogu yeedho “xidigta isirada”, sida lagugu tusay [jaantuska 2.1](#).



Jaantuska 2.1

Bal aan eegno tirooyinka kale.

Tusaale: tirada 1 waxay leedahay hal isir, taas oo ah 1. Tirooyinka idil ee kale waxay leeyihiin ugu yaraan labo isir: 1 iyo tirada qudhigeeda. Tirooyinka qarkood waxay leeyihiin 2 isir oo kaliya, iyo kuwa kale oo leh in kabadan labo. Tusaale, 0 waxay leedahay tirooyin isiro oon xad lahayn.

Tusaale 2:

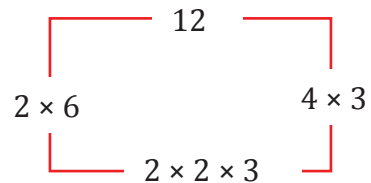
- b** $12 = 1 \times 12 = 2 \times 6 = 3 \times 4$
- t** $5 = 1 \times 5$
- j** $1 = 1 \times 1$
- x** $0 = 0 \times 1 = 0 \times 2 = 0 \times 3 = 0 \times 4 = \dots$

Tiro kaste oo idil waxaa lagu qeexi karaa sida taranka isiradiisa. Haddii isirada taran kaste ay ka weynyihiin 1, kadib habkani waxaa loogu yeedhaa isireynta tirada idil. Tusaale, 1×2 ma’aha isireynta 12; meesha 2×6 iyo 3×4 ay ka yihiin isireynta 12.

Tirada lagu siiyay

Isireynta iyada oo la isticmaalayo labo tiro..

Markii isireyntu ay sii socoto.....



Sida kor lagugu tusay, isireynta ugu danbeysa ee 12 waa $2 \times 2 \times 3$. Sababta aan u leenahay waa ugu danbeyn tirooyinka 2 iyo 3 mid walba waxay leedahay labo isir, 1 iyo lafteeda. Taas oo ah, 1 iyo 2 waa labada isir ee keli ah ee 2; 1 iyo 3 na waa labada isir ee keli ah ee 3.

Hawlgalka 2.6

Adoo kaashanaya tusaalaha 2 samee adoo taxaya qeybsamida tirooyinka u dhaxeeya 1 iyo 20 sida lagugu tusay shaxda 4 ee hoose.

- b** Goobo gali tirada u qeybsanta 1 iyo iyada laftigeeda oo keli ah
- t** Hoos ka xariiq tiro walba oo leh in kabadan labo isir.

Shaxda 4:

Tiro	u qeybsanta (isiro)	Tiro	u qeybsanta (isiro)	Tiro	u qeybsanta (isiro)	Tiro	u qeybsanta (isiro)
1	1	6		11		16	
2		7	1,7			17	
3		8		13	1,13	18	1, 2, 3, 6, 9, 18
4		9		14		19	
5		10	1, 2, 5, 10	15		20	

Qeexid 2.1: Tiro mutuxan waa tiro idil oo ka weyn 1 lehna labo isir oo kala duwan. Labada isir waa 1 iyo tirada qudhigeeda. Tiro farcan waa tiro idil oo kaweyn 1 lehna in kabadan labo isiro. Tirooyinka idil ee 1 iyo 0 ma aha tiro mutuxan iyo tiro farcantoona.

Tusaale 3: b

b	$12 = 2 \times 6 = 2 \times 2 \times 3$
t	$27 = 3 \times 9 = 3 \times 3 \times 3$
j	$60 = 2 \times 30 = 2 \times 2 \times 15 = 2 \times 2 \times 3 \times 5$
x	$90 = 2 \times 45 = 2 \times 3 \times 15 = 2 \times 3 \times 3 \times 5$

Markii tiro lagu qeexo taranta isirada ee dhammaan ah tiro mutuxan, sifadaa waxaa loogu yeedhaa isireynta mutuxan.

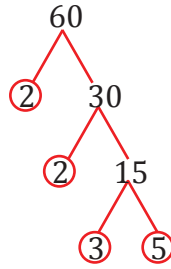
Jaantus walba ee hoos ku xusan waxay natusinayaan siyaabaha kala duwan ee loogu helo isireynta mutuxan ee 60.

$$\begin{array}{c}
 60 \\
 \swarrow \quad \searrow \\
 2 \times 30 \\
 \swarrow \quad \searrow \\
 2 \times 5 \times 6 \\
 \swarrow \quad \searrow \\
 2 \times 5 \times 2 \times 3
 \end{array}$$

$$\begin{array}{c}
 60 \\
 \swarrow \quad \searrow \\
 3 \times 20 \\
 \swarrow \quad \searrow \\
 3 \times 4 \times 5 \\
 \swarrow \quad \searrow \\
 3 \times 2 \times 2 \times 5
 \end{array}$$

$$\begin{array}{c}
 60 \\
 \swarrow \quad \searrow \\
 6 \times 10 \\
 \swarrow \quad \searrow \quad \swarrow \quad \searrow \\
 2 \times 3 \times 2 \times 5
 \end{array}$$

Ogsoonaw falaadhaha geedeynta isir kasta waa isku mid waxaan ka ahayn habka isirada loo taxay. Tiro walba urur gooni u ah oo isirada mutuxan ah ayuu leeyahay. Isireynta mutuxan ee 60 waxaa si fudud loogu heli karaa iyada oo la adeegsanayo geedka isirka ee soo socda;



Isireynta mutuxan ee 12, 27, 60 iyo 90 waxaa kaloo lagu qori iyada oo la adeegsanayo tidica jibaaranaha sida;

b $12 = 2 \times 2 \times 3 = 2^2 \times 3$

t $27 = 3 \times 3 \times 3 \times 3 = 3^3$

x $90 = 2 \times 3 \times 3 \times 5 = 2 \times 3^2 \times 5$.

Laylis 2.4

- 1 Raadi dhammaan isirada tirooyinkan soo socda, adoo adeegsanaya “isirka-xidigta”.

b 16	t 35	j 17	x 20
-------------	-------------	-------------	-------------
- 2 Kala sooc weedhahan soo socda midda runta ah iyo midda beenta ah.

b 1 waxay haysataa hal isir.	t Tiro walba oo idil kana weyn 1 ugu yaraan waxay leedahay hal isir.	j Tiro kasta oo idil waxay leedahay ugu yaraan hal isir.	
-------------------------------------	---	---	--
- 3 Kuwan soo socda kuwee baa ah tirooyin mutuxan?
7, 9, 17, 27, 31, 49, 75, 83, 19, 29, 39, 43, 56, 61, 73, 87
- 4 Qor dhammaan tirooyinka mutuxan ee u dhexeeya 15 iyo 50.
- 5 Raadi isirada tirooyinkan soo socda.

b 9	t 19	j 90	x 60
------------	-------------	-------------	-------------
- 6 Kala sooc tirooyinkan soo socda mid walba in ay tahay tiro mutuxan, farcan ama midnaba.

b 13	t 27	j 96	x 23
kh 0	d 37	r 1	s 177
sh 233	dh 507		
- 7 Raadi isireynta tirooyinkan mutuxan ee soo socda

b 25	t 36	j 80	x 72	kh 117
-------------	-------------	-------------	-------------	---------------
- 8 Ku cadee tirooyinkan soo socda isireynta mutuxan hadey suurto gal tahay ku qor midwalba

b 18	t 21	j 32	x 40
kh 48	d 72	r 81	s 100

2.2.3 Isirada Lawadaago

Casharkan dhexdiisa waxaad ku baran sida loo helo isirada tirade idil. Bal aan eegno tusaalooyinka soo socda si ay kaaga caawiyaan xusuusinta waxa aad horey u soo dhigatay.

Tusaale 4: Tax isirada 16.

Furfuris: Sababtoo ah $1 \times 16 = 16$, 1 iyo 16 waa isirada 16.

Sababtoo ah $2 \times 8 = 16$, 2 iyo 8 waa isirada 16.

Sababtoo ah $4 \times 4 = 16$, 4 waa isirka 16.

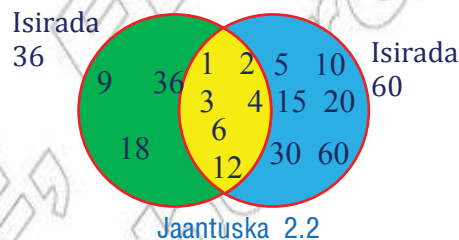
Sidaa awgeed, isirada 16 waa 1, 2, 4, 8 iyo 16.

Cashirka 2.2.3. waxaad ku baran doontaa sidii aad u sooci lahayd isirada ay wadaagaan labo ama saddex tirooyinka idil ee leh hal ama labo god. Bal hadda fiiri isirada tirooyinka 36 iyo 60.

Isirada 36: 1, 2, 3, 4, 6, 9, 12, 18, 36

Isirada 60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

Kadib, istic maal jaantuska feen (jaantus 2.2) si aad u heshid isirada ay wadaagaan 36 iyo 60.



Ogsoonaw in 1, 2, 3, 4, 6, iyo 12 ay yihiin isirada 36 iyo 60.

Isirweynaha ay wadaagaan (I.W.W) 30 iyo 60 waa 12

Waxaan u dhigi karnaa talaabooyinka kore sidan hoos ku xusan.

Si aan u helno Isirweynaha ay wadaagaan labo ama saddex tirooyinka idil.

- 1 Tax dhammaan isirada tiro kaste.
- 2 Calaamadee isirada ay wadaagaan taxii kaste.
- 3 Dooro isirka u weyn ee ay wadaagaan.

Tusaale 5: Raadi Isir weynaha ay wadaagaan 12, 54 iyo 90.

Furfuris: Si aad u heshid isir weynaha ay wadaagaan (I.W.W) 12, 54 iyo 90,

- 1 Tax dhammaan isirada tiro kasta

Isirada 12: 1, 2, 3, 4, 6, 12

Isirada 54: 1, 2, 3, 6, 9, 18, 27, 54

Isirada 90: 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90

2 Calaamad u yeel isirada ay wadaagaan sida kor lagugu tusay:

Isirada ay wadaagaan 12, 54 iyo 90 waa 1, 2, 3 iyo 6.

3 Qor isir weynaha ay wadaagaan: 6

Sidaa darteed, isir weynaha ay wadaagaan 12, 54 iyo 90 waa 6.

Qeexid 2.2: labo tiro waxaa la odhan karaa markii la isu aaneeyo wey mutuxan yihiin, haddii ayna lahayn wax ay wadaagaan waxaan ka'ahayn 1.

Tusaale 6: Tirooyinka 14 iyo 15 waa mutuxan isu aaneyntoodu sababtoo ah

$$14 = 2 \times 7 \text{ iyo } 15 = 3 \times 5$$

Laylis 2.5

1 Raadi I.W.W mid walba oo ka mid ah tirooyinkan lamaanaha ah.

b 21, 28 **t** 24, 48 **j** 63, 84 **x** 60, 80

2 Raadi I.W.W mid walba oo ka mida tirooyinkan saddaxan.

b 24, 36, 42 **t** 36, 15, 45 **j** 35, 49, 84 **x** 36, 72, 90

3 Qor saddex tiro oo I.W.W(isir waynaha ay wadaagaan) uu yahay 5.

4 Tirooyinka 12 iyo 15 ma tiroyin mataxanbaa? Sharaxaad kabixi

2.2.4 Dhufsanayaasha ay wadaagaan

Xusuusnaw: cashirka 2.2.1 ee ahaa tiro lagu siiyay dhufsanayaasheedu waxaa lagu heli karaa iyada oo tiro kasta lagu dhufanayo tiro idil.

Tan kale xusuusnaw 0 in ayna noqonin qeybshe.

Cuttub - hoosaadkani, waxaad ku baran doontaa sida loo sooco dhufsanaha ay wadaagaan labo ama saddex tiro idil lehna hal ama labo god.

Qeexid 2.3: Dhufsanaha ay wadaagaan waa tiro noqota dhufsanaha labada tirooyinba ama in ka badan.

Tusaale 7: Raadi ururka dhufsanayaasha tirooyinka idil ee 10 iyo 8.

Furfuris:

Dhufsanayaasha 10: {0, 10, 20, 30, 40, 50, 60, 70, 80, ...}

Dhufsanayaasha 8: {0, 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, ...}

Ebar waa dhufsanaha tiro walba. Sidaa awgeed; 0, 40, 80,....waa dhufsanayaasha ay wadaagaan 10 iyo 8. Laakiin markii aan ka hadleyno dhufsanaha yar ay wadaagaan tirooyinku waxaynu ujeednaa waxa aan ka'ahayn Eber.

Sidaa awgeed, dhufsanaha yare ee ay wadaagaan (DH.Y.W) 10 iyo 8 waa 40. Xusuusnaw DH.Y.W tiro aan ahayn eber.

Dhufsanaha yaraha ay wadaagaan labo ama in ka badan oo tirooyinka idil waa;

- 1 Tiro tirsiiimo ee ugu yare ee ah dhufsanaha tiro walba idil, ama
- 2 Tiro tirsiiimo ee ugu yare ee qeybisa tiro kasta oo idil hadhaa la'aan.

Tusaale 8: Raadi DH.Y.W 12 iyo 18

Furfuris: Si aan u helno DH.Y.W 12 iyo 18:

- 1 Tax dhufsanayaasha tiro kasta

Dhufsanayaasha 12: 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120,...

Dhufsanayaasha 18: 0, 18, 36, 54, 72, 90, 108, 126,...

- 2 Tax dhufsanayaasha eber mooye inta kale ee ay wadaagaan:
36, 72, 108,

Sidaa awgeed, DH.Y.W 12 iyo 18 waa 36.

Tusaale 9: Raadi DH.Y.W 8, 9 iyo 12:

- 1 Tax dhufsanayaasha tiro walba

Dhufsanayaasha 8: 0, 8, 16, 24, 32, 40, 48, 56, 64, 72, 80,...

Dhufsanayaasha 9: 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90,...

Dhufsanayaasha 12: 0, 12, 24, 36, 48, 60, 72, 84, 96, 108, 120,...

- 2 Tax; Eber mooyaane wixii kale ee ay wadaagaan; 72, 144...

Sidaa darteed, DH.Y.W 8, 9 iyo 12 waa 72.

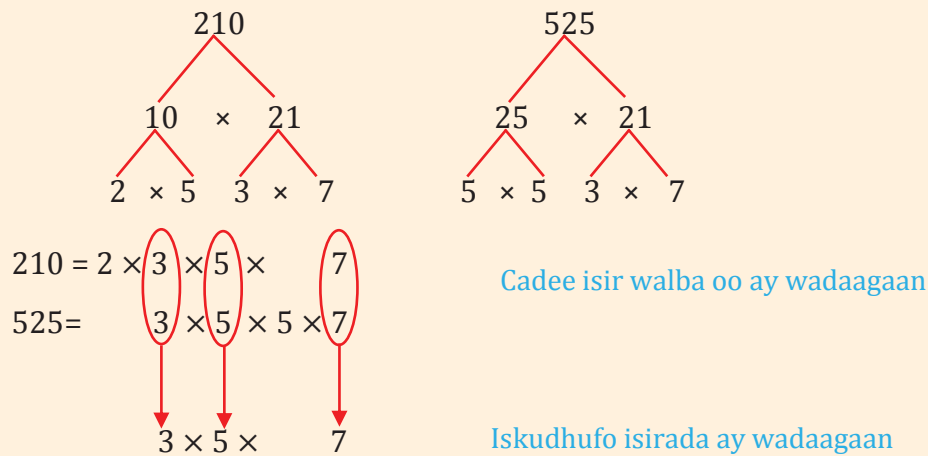
Waxaa ku xiga oon eegeynaa sida loo soo saaro tirooyinka isireynta mutuxan si loo helo I.W.W iyo DH.Y.W labo ama saddex tirooyinka idil.

Si loo helo I.W.W tirooyinka ururka

- 1 Qor isireynta mutuxan ee tiro kasta.
- 2 Kala sooc dhammaan isirada mutuxan ee ay wadaagaan.
- 3 Raadi taranta tirooyinka mutuxan ee ay wadaagaan.

Tusaale 10: Raadi I.W.W 210 iyo 525 adoo isticmaalaya isireynta mutuxan.

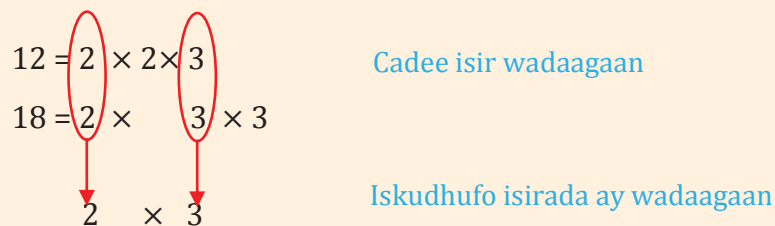
Furfuris:



Isirada mutuxan ee ay wadaagaan 210 iyo 525: 3, 5, 7.

Sidaa darteed, I.W.W 210 iyo 525 waa $3 \times 5 \times 7 = 105$.

Tusaale 11: Raadi I.W.W 12 iyo 18 adoo isticmaalaya isireynta mutuxan.

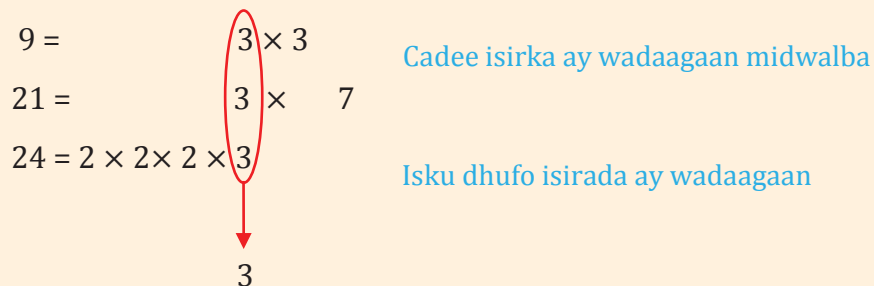


Isirada mutuxan ee ay wadaagaan 12 iyo 18: waa 2 iyo 3

Sidaa darteed, I.W.W 12 iyo 18 waa $2 \times 3 = 6$.

Tusaale 12: Raadi I.W.W. 9, 21, iyo 24 adoo isticmaalaya isireynta mutuxan.

Furfuris:



Isirka mutuxan ee ay wadaagaan 9, 21 iyo 24 waa 3.

Sidaa darteed, I.W.W 9, 21, iyo 24 waa 3.

Si aan u helno I.W.W labo ama in ka badan oo tirooyinka tirsiiimo ah Adoo isticmaalaya isireynta mutuxan:

- 1 Ku qor tiro walba qaabka isireynta mutuxan.
- 2 Sooc isirada ay wadaagaan isirka mutuxan ee lagu siiyay wuxuu noqon karaa mid lawadaago in ka badan mar.
- 3 Raadi taranta isirada mutuxan ee ay wadaagaan. Soo qaado isirka ay wadaagaan ka u muuqda tirada noq-noqodkiisu in uu ugu yar yahay.

Sidoo kale, waxaad u isticmaali kartaa isireynta mutuxan si aad u heshid DH.Y.W tirooyinka, dhufsanaha ay wadaagaan wuxuu ka kooban yahay dhammaan isirada mutuxan ee tiro walba oo ku jira urur. DH.Y.W wuxuu ka kooban yahay qeybshe walba tirada ugu jibaarane badan ee ka dhex muuqata ururka tirada.

Tusaale 13: Raadi DH.Y.W 12 iyo 18 adoo isticmaalaya isireynta mutuxan.

Furfuris:

$$\begin{array}{l} 12 = 2 \times 2 \times 3 \\ 18 = 2 \times 3 \times 3 \end{array}$$

Cadee qeybshe walba oo ay wadaagaan iyo qeybshe yaasha kalaba

Isku dhufo dhammaan qeybshe yaasha, adoo qaadanaya tirada ugu jibaarane badan.

Sidaa darteed, DH.Y.W tirooyinka 12 iyo 18 waa $2 \times 2 \times 3 \times 3$, ama $2^2 \times 3^2 = 36$.

Tusaale 14: Raadi DH.Y.W tirooyinka 9, 21 iyo 24 adoo isticmaalaya isireynta mutuxan.

Furfuris:

$$\begin{array}{l} 9 = 3 \times 3 = 3^2 \\ 21 = 3 \times 7 = 3 \times 7 \\ 24 = 2 \times 2 \times 2 \times 3 = 2^3 \times 3 \end{array} \quad \left. \vphantom{\begin{array}{l} 9 \\ 21 \\ 24 \end{array}} \right\} \begin{array}{l} \text{Jibaaranaha ugu weyn ee 2 waa } 2^3 \\ \text{Jibaaranaha ugu weyn ee 3 waa } 3^2 \\ \text{Jibaaranaha ugu weyn ee 7 waa } 7^1 \end{array}$$

Sdaa darteed, DH.Y.W 9,21 iyo 24 waa $2^3 \times 3^2 \times 7 = 504$.

Laylis 2.6

- 1 Raadi Isirada mutuxan ee tirooyinkan soo socda.

b	56	t	84	j	72	x	210
kh	306	d	150	r	510	s	330
sh	252	dh	126				
- 2 Raadi I.W.W tirooyinkan lamaan adoo isticmaalaya isireynta mutuxan.

b	21, 28	t	68, 102	j	60, 80
x	27, 54	kh	63, 84		
- 3 Raadi I.W.W tirooyinkan urur kaste adoo isticmaalaya isireynta mutuxan.

b	24, 36, 42	t	35, 49, 84	j	45, 105, 75
x	90, 252, 630				
- 4 Waa maxay I.W.W $2 \times 3^2 \times 5^2$ iyo $2^3 \times 3 \times 5^2$?
- 5 Sideen u sheegi karnaa inaga oo fiirineyna oo keli ah in ay labo tirooyin ay yeelanayaan qeybshaha 3?
- 6 Qor saddex tirooyin oo I.W.W uu yahay 5.
- 7 Raadi DH.Y.W tirooyinkan lamaan ee soo socda adoo isticmaalaya isireynta mutuxan.

b	12, 16	t	20, 50	j	16, 24	x	15, 18
----------	--------	----------	--------	----------	--------	----------	--------
- 8 Raadi DH.Y.W tirooyinka urur kasta adoo isticmaalaya isireynta mutuxan.

b	2, 7, 8	t	8, 28, 30	j	35, 25, 49	x	68, 170, 4
----------	---------	----------	-----------	----------	------------	----------	------------
- 9 Waa markee marka uu DH.Y.W labo tiro uu noqdo mid ka mid ah labada tiro?
- 10 Waa markee marka uu DH.Y.W labo tiro uu noqdo taranka labada tiro?
- 11 Aamina waxay rabtaa in ay goyso labo sagxadood si ay uga sameyso kabadho. Sagxadaha midkood dhererkiisu waa 72 iyo kan kalana dherarkiisu waa 54. Aamina waxay rabtaa kabadhadu in ay isku dherer ahaadaan, iyadu ma dooneyso in ay wax alwaax ah ka khasaaro.

b	Waa maxay kabadhka ugu dherer badan?
t	Imisa kabadho ay Aamina lahaan doontaa?
- 12 Labo basaska caasimada Addis-Ababa ah ay isku mar ka anbabaxay saldhiga markaato iyo kadib waxay gaadheen saldhig iyaga oo ku kala tagay daqiiqadaha 12 iyo 18. Imisa daqiiqooyin kadib ayay basasku hadana ay kulmi doonaan?
- 13 Saddex ganbaleel oo kala ah B1, B2, B3 ayaa kala dhawaaqay 6,9, iyo 12 sikino sida ay isugu xig-xigaan. Imisa sikino kadib ayay mar kale wada dhawaaqayaan?

Hubin

<ul style="list-style-type: none"> → Dhufsanayaasha → Dhufsane yaraha lawadaago (D.H.Y.W) → Isir weynaha lawadaago (I.W.W) → Isirada iyo Dhufsanayaasha → Isireynta Mutuxan → Tirooyinka Farcan → U qeybsanaanta → Wadarta/Faraqyada qeybsanaanta → Xidhiidhka mutuxan 	<ul style="list-style-type: none"> → Dhufsanayaasha lawadaago → Habka Isireynta → Isirada → Isirada lawadaago → Taranada qeybsanaanta → Tirooyinka Mutuxan → U qeybsanaanta tirooyinka idil → Xeerarka/Tijaabooyinka → qeybshayaasha kala ah 2, 3, 4, 5, 6, 8, 9 iyo 10
---	--

Soo Koobida Cutubka

1	<i>Tijaabooyinka Qeybsanaanta</i>	<i>Tusaalooyinka</i>
2:	Haddii booska godka koowaadku uu yahay 0, 2, 4, 6, ama 8 taas oo ah tirada dhaban	1,294: hal godluhu 4 waa dhaban.
3:	Haddii wadarta gododku ay u qeybsanto 3	405: $4 + 0 = 4$ iyo 636: $6 + 3 + 6 = 15$; $1 + 5 = 6$ Taas oo si cad ugu qeybsanta 3. 16, 497: $1 + 6 + 49 + 7 = 27$; $2 + 7 = 9$, taas oo si cad ugu qeybsanta 3
4:	Haddii labada god ee ugu danbeysa tirada ay u qeybsanto 4.	40832: 32 waxay u qeybsantaa 4. ($32 \div 4 = 8$)
5:	Haddii hal godluhu uu yahay 0 ama 5.	495: hal godluhu waa 5
6:	Haddii u qeybsamo 2 iyo 3	1,458: $1 + 4 + 5 + 8 = 18$, sidaa darteed, waxay u qeybsantaa 3 iyo godka u danbeeyana ee ah 8 waa dhaban; sidoo kale, tiradu waxay u qeybsantaa 6.

8: Haddii saddexda god ee ugu danbeysa tirada ay u qeybsanto 8	34152: 152 waxay u qeybsantaa 8. ($152 \div 8 = 19$)
9: Haddii wadarta gododku ay u qeybsanto 9.	2,880: $2 + 8 + 8 + 0 = 18$: $1 + 8 = 9$, taas oo si cad ugu qeybsanta 9.
10: Haddii booska hal godluhu uu yahay 0.	130: booska hal godluhu waa 0.

- 2 Dhufsane waa tiro ka tarantay tiro idil. Tirooyinka la isku dhufanayo waxaa Ladhahaa isiro ama qeybsheyaal.
(Tusaale: $6 \times 7 = 42$, 42 waa dhufsanaha 6 iyo 7, meesha 6 iyo 7 ay ka yihiin qeybsheyaasha 42).
- 3 Tiro mutuxan waa mid leh labo isiro, hal iyo isaga laftiisa.
(Tusaale: 11 waa tiro mutuxan sababtoo ah wuxuu leeyahay labo isiro oo keli ah, 1 iyo 11).
- 4 Tiro farcan waa mid leh isiro kabadan labo.
(Tusaale: 12 waa tiro farcan sababtoo ah waxay leedahay isiro kabadan labo, 1, 2, 3, 4, 6 iyo 12).
- 5 Tirooyinka 0 iyo 1 ma aha tiro mutuxan iyo mid farcan toona.
- 6 Haddii labo tirooyin aynan wadaagin wax qeybsheyaal ah waxaan ka'ahayn 1, tirooyinka waxaa la dhahaa xidhiidhka mutuxan.
(Tusaale: 14 iyo 15 waa xidhiidhka mutuxnaanta).
- 7 Isir weynaha ay wadaagaan tirooyinka labo ama in kabadan waa tirada ugu weyn kaas oo ah qeybshaha ay wadaagaan tirooyinku.
- 8 Habka tirada loogu qoro sida tarankooda isirada waxaa la dhahaa isireynta. Markii tiro lagu sifeeyo taranka isirada mutuxan, waxaa loogu yeedhaa isireynta mutuxan ee tirada.
(Tusaale: Isireynta mutuxan ee 12 waa $2 \times 2 \times 3 = 2^2 \times 3$)
- 9 Dhufsane yaraha ay wadaagaan (DH.Y.W) tirooyinka labo ama in kabadan waa tirada ugu yare ee aan ahayn ebar ee ay wadaagaan tirooyinku. (Tusaale: DH.Y.W 10 iyo 8 waa 40).

? Layliska Nakhtiinka Cutubka 2^{aad}

- 1 Qor dhufsanayaasha 15 kuwaas oo ka yar 70.
- 2 **b** Qor dhammaan qeybsheyaasha (i) 9 (ii) 13
t Tirooyinka lagu siiyay keebaa tiro mutuxan ah?
- 3 Weedhahan soo socda keebaa ah run? Keebaana ah been?
b 5 waa isirka 56. **x** 1 waa isirka 17.
t 23 isaga ayaa isu ah isir. **j** 0 waa isirka 5.
- 4 Qor dhammaan tirooyinka mutuxan ee u dhaxeeya 20 iyo 30.
- 5 Go'aami weedhahan soo socda in ay yihiin run ama been. Sabab u yeel.
b 2 waa isirka $12 + 36$. **t** 7 waa isirka 14×28 .
- 6 **b** Jeegaree qeybsamida
i 11128 loo qeybiyay 4 **ii** 1254 loo qeybiyay 6
t Sabab u yeel.
- 7 U qor mid walba oo ka mid ah tirooyinka soo socda qaabka isireynta mutuxan. Mid walba ku muuji isireynta mutuxan adoo isticmaalaya tidica jibaaranaha, hadey suurto gal tahay.
b 42 **t** 24
- 8 Raadi I.W.W midwalba oo ka mid ah tirooyinkan lamaan ee soo socda.
b 12 iyo 28 **t** 18 iyo 25
- 9 Raadi D.Y.W midwalba oo ka mid ah tirooyinkan lamaan ee soo socda
b 9 iyo 12 **t** 16 iyo 48 **j** 3 iyo 5
- 10 Waxaa lagu siiyay
A = ururka dhufsanayaasha 4 ee ka yar 10 iyo
B = ururka isirada 8, ka jawaab kuwan soo socda.
b Tax dhammaan xubnaha
i Ururka A **ii** Ururka B
t Ururka A hormo urur ma u yahay B? ku muuji jawaabahaada adoo isticmaalaya calaamado.