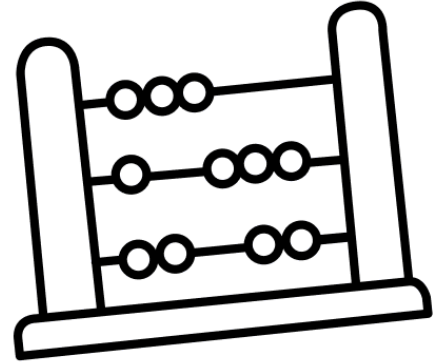


Fahanka xayaysiisyada (Understanding advertising)



Maths

Unit Ka fikirka xasaasiga ah ee xisaabta (Thinking critically with maths)

Natiijo

Waxaan falanqeyn karaa xayaysiisyada iyo sheegashada suuqgeynta.

Erayada muhiimka ah

Saami (Proportion) waa isbarbardhig qayb-iyo-dhammaan (marmar qayb-iyo-qayb). Haddii laba shay ay saami (proportion) yihiin, markaas saamiga qayb-iyo-dhammaan waa la ilaaliyaa, iyo xiriirka isku dhufashada ee u dhexeeya qaybaha sidoo kale waa la ilaaliyaa.

Halbeeg (unit) waa mid ka mid ah wax qeexaya 'kow' aad ku tirinayso.

Fahanka xayaysiisyada (Understanding advertising)



Isbarbardhigga xayaysiisyada (Comparing promotions)



Qiimeynta halbeegga (Cutubka pricing)



Falanqaynta xayaysiisyada (Analysing adverts)

Isbarbardhigga xayaysiisyada (Comparing promotions)



Waxaan u isticmaali karnaa xirfadahayaga saami (proportion) si aan uga caawinno go'aamada ku saabsan qiimaha (value) lacagta.

Dukaan weyn ayaa bixiya 330 ml oo qasacadaha liin dhanaan ah oo laba baakad oo cabbir kala duwan ah.

Heshiis gaar ah:
8 baakad oo liin dhanaan ah
£4.10



Sidee ku ogaan karnaa midka qiimihiisu (value) ugu fiican yahay?

Heshiis gaar ah:
8 baakad oo liin dhanaan ah
£4.10

12 baakad oo liin dhanaan ah
£6.20

Waxaan u baahanahay inaan isbarbardhiggo qiimaha tiro isku mid ah oo qasacado ah.

Waxaan ku xisaabin doonaa
qiimaha (value) 24
daasadood mid kasta.



Maxaad u malaynaysaa in Layla ay dooratay 24 daasadood?

24 waa tirada guud ee ugu hooseysa (lowest common multiple) ee 8 iyo 12.

Hesho gaar ah:
8 baakad oo leymunad (lemonade)
£4.10

12 baakad oo leymunad
(lemonade)
£6.20

Waxaan u baahanahay inaan isbarbardhigno qiimaha (value) tirada daasadaha isku midka ah.

Waxaan ku xisaabin doonaa
qiimaha (value) 24
daasadood mid kasta.



Layla

Waxaan ku xisaabin
doonaa qiimaha (value) 4
daasadood mid kasta.



Caasha

Waxaan ku xisaabin
doonaa qiimaha (value)
daasad kasta (per can) mid
kasta.



Cabdi

Habkee ayaad doorbidaysaa?

Hesho gaar ah:
8 baakad oo leymunad (lemonade)
£4.10

12 baakad oo leymunad
(lemonade)
£6.20

Waxaan ku xisaabin
doonaa qiimaha (value) 24
daasadood mid kasta.



× 3

8 daasadood	£4.10
24 sanduuq (cans)	

× 3

× 2

12 sanduuq (cans)	£6.20
24 sanduuq (cans)	

× 2

Kee ayaa qiime (value) lacag ahaan ka fiican?

Tirada isku midka ah ee sanduuqyada (cans) ayaa ka jaban haddii aad ku iibsato xirmooyin 8 ah, sidaas darteed xirmooyinka 8 ayaa qiime (value) lacag ahaan ka fiican.

Hesho gaar ah:
8 xirmo oo lemonade ah
£4.10

12 xirmo oo lemonade ah
£6.20

Waxaan ku doonaa inaan
xisaabiyo kharashka 4
sanduuq (cans) mid kasta.


 $\div 2$

8 sanduuq (cans)	£4.10
4 sanduuq (cans)	

$\div 2$

 $\div 3$

12 sanduuq (cans)	£6.20
4 sanduuq (cans)	

$\div 3$

Isticmaalka habkan waxaan arki karnaa in qiimaha (value) 4 sanduuq (cans) uu ka jaban yahay heshiiska koowaad.

Ma iibsano karno 4 sanduuq (cans) maxaa yeelay waxay ku yimaadaan xirmo 8 ama 12 ah, laakiin waxaan isbarbardhigi karnaa qiimaha (value) relative '4 sanduuq (cans) kasta'.

Habkani wuu adkaan lahaa haddii aanan isticmaalin xisaabiyaha (calculator).

Hesho gaar ah:
8 xirmo oo lemonade ah
£4.10

12 xirmo oo lemonade ah
£6.20

Waxaan ku doonayaa
inaan xisaabiyo qiimaha
(value) qasac kasta.


 $\div 8$

8 sanduuq (cans)	£4.10
1 qasac (can)	

$\div 8$ $\div 12$

12 qasacadood (cans)	£6.20
1 qasac (can)	

 $\div 12$

Tan waxaa badanaa loo yaqaan habka halbeegga (unitary method) maxaa yeelay waxaad helayso qiimaha (value) halbeeg kasta.

Mar labaad habkani wuu adkaan lahaa haddii aadan isticmaalin xisaabiyaha (calculator).

Qiimaha (value) qasac kasta wuxuu u eg yahay. Waxaan aragnay in, haddii aad iibsato 24 qasac, aad badbaadin karto 10 pence guud ahaan.

Isbarbardhigga horumarinta (promotions)

Kuwan u kala horree, laga bilaabo kan ugu qiimaha (value) fiican.

a Baakad 4 doughnut ah £1.40

b Baakad 5 doughnut ah £1.80

c Baakad 8 doughnut ah £2.50

d libso 2, midna bilaash, 50p midkiiba



Jawaabaha:

$$1.4 \div 4 = \text{£}0.35$$

50 p

50 p

$$1.8 \div 5 = \text{£}0.36$$

Bilaash
(Free)

$$1 \div 3 = \text{£}0.333 \dots$$

$$2.5 \div 8 = \text{£}0.3125$$

$$3 \text{ £}1$$

Kuwan u kala horree, laga bilaabo kan ugu qiimaha (value) fiican.

Qiimaha (value) ugu fiican

c

Baakad 8 doughnut ah £2.50

$$2.5 \div 8 = \text{£}0.3125$$

d

libso 2, midna bilaash, 50p midkiiba

$$1 \div 3 = \text{£}0.333 \dots$$

a

Baakad 4 doughnut ah £1.40

$$1.4 \div 4 = \text{£}0.35$$

b

Baakad 5 doughnut ah £1.80

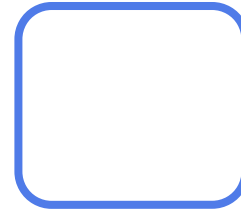
$$1.8 \div 5 = \text{£}0.36$$

Qiimaha ugu xun (Worst value for money)

Comparing promotions

Lucas wuxuu doonayaa inuu iibsado crisps xafladda dhamaadka dugsiga fasalkiisa.

There are 15 pupils in his class and he wants everyone to get one pack each. Which of these is better value for money?



Waxaan ku bilaabi karnaa helista qiimaha baakad kasta:

5 packs	£1.75
1 pack	£0.35

12 packs	£3.35
1 pack	£0.279...

24 packs	£5.80
1 pack	£0.241...

Comparing promotions

Lucas wuxuu doonayaa inuu iibsado crisps xafladda dhamaadka dugsiga fasalkiisa.

There are 15 pupils in his class and he wants everyone to get one pack each.

5 pack
£1.75

12 pack
£3.35

24 pack
£5.80



But I don't need any left over
so can I get 15 packs
cheaper another way?

In kastoo tani aanay ahayn qiime (value) fiican oo lacag ah, iibsashada 3 xirmo oo 5 ah waxay ku kici doontaa Cabdi wax ka yar.

Haddii xirmooyinka dheeraadka ah ay u socdaan inay khasaaraan, tani waxay noqon lahayd mid ka jaban.

Isbarbardhigga xayaysiisyada (promotions)

Cabdi wuxuu rabaa inuu iibsado crisps (crisps) xafladda dhamaadka simistarka ee fasalkiisa.

Waxaa jira 15 arday oo fasalkiisa ah, wuxuuna rabaa in qof kastaa helo hal xirmo.

5 xirmo
£1.75

12 xirmo
£3.35

24 xirmo
£5.80

Waxaan arki karaa
hab ka jaban.



Layla

Sidee buu Cabdi u iibsan karaa ugu yaraan 15 xirmo isla markaana ugu yar kharashka?

Isbarbardhigga xayaysiisyada (promotions)

Dukaamadu waxay isticmaalaan xayaysiisyada (promotions) si ay ugu dhiirigeliyaan macaamiisha inay wax badan iibsadaan.

Inta badan, xayaysiisyadu waxay bixiyaan qiime (value) ka fiican oo lacag ah.

Si kastaba ha ahaatee, had iyo jeer waa fiican tahay inaad adigu hubiso.



Maxaa khalad ku ah mid kasta oo ka mid ah xayisyadan?

Dukaamadu waxay isticmaalaan xayisyada si ay ugu dhiirigeliyaan macaamiisha inay wax ku iibsadaan.

Inta badan, xayisyadu waxay bixiyaan qiime (value) ka fiican oo lacagta ah.

Si kastaba ha ahaatee, had iyo jeer waa fiican tahay inaad adigu hubiso.

Cereal 50% dheeri ah
£5.40

Kiish caadi ah £3.60

Jam
£1.60 mid kasta

3 mid
kasta £5

Shampoo
£2.30 mid kasta

5 mid
kasta £11

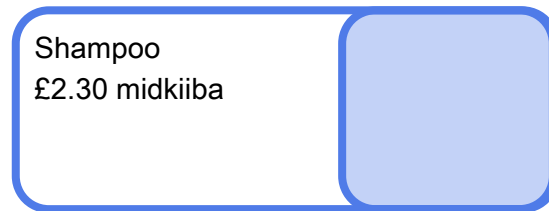
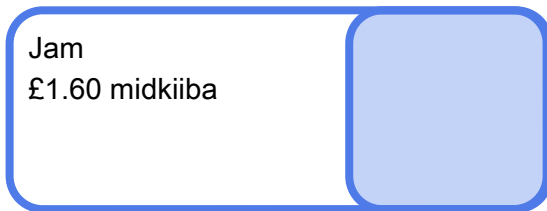
Tani ma bixiso kayd (savings) ah, waxaad heleysaa 50% dheeri ah oo cereal ah 50% qiimo dheeri ah.

Dhab ahaantii waa ka jaban yahay iyada oo aan lahayn xayisyada.

Dukaamadu waxay isticmaalaan xayisyada si ay ugu dhiirigeliyaan macaamiisha inay wax ku iibsadaan.

Inta badan, xayisyadu waxay bixiyaan qiime (value) ka fiican oo lacagta ah.

Si kastaba ha ahaatee, had iyo jeer waa fiican tahay inaad adigu hubiso.



Waxaad badbaadinaysaa 50 p wadar ahaan haddii aad iibsato 5 dhalo.

Si kastaba ha ahaatee, waxaad ku dambaynaysaa inaad ku bixiso £11 shampoo si aad u badbaadiso 50 p.

Waxay ku xidhan tahay inta shampoo aad isticmaasho in badbaadinta 50 p ay mudan tahay iyo in kale.

Jawaabaha:

Cereal 50% dheeri ah

~~£5.40~~ = 11.50

3 mid oo
kasta oo £5

5 mid oo
kasta oo £11

Bac caadi ah £3.60

Layla waxay rabta inay iibsato 10 tufaax. Waa maxay habka ugu jaban?

1 tufaax
42 p

6 tufaax oo xirmo ah
£1.99

Xirmada 6-da ayaa qiime (value) fiican u ah lacagta.

(iibsashada 2 xirmo oo 6 ah waxay ku kacaysaa £3.98)

Waxay ku kacaysaa qiimo (value) yar inaad iibsato xirmo 6 ah iyo 4 tufaax oo kala duwan marka loo eego 2 xirmo oo 6 ah.

1) Isticmaal laba hab oo kala duwan si aad u muujiso in xirmooyinka 6-ka rooga ay qiime (value) fiican u yihiin lacagta marka loo eego xirmooyinka 4-da rooga.

4 xirmo oo roog jilicsan ah
90 p

6 xirmo oo roog jilicsan ah
£1.20

2) Caasha waxay u baahan tahay 500 g oo boqoshaa ah (mushrooms) cunto lagu quudiyo 2 qof.

Boqoshaa (Mushrooms) 150 g
80 p

Boqoshaa (Mushrooms) 400 g
£1.10

Boqoshaa (Mushrooms) 600 g
£1.80

- a) Kiish kasta, waa maxay qiimaha (value) 100 garaamkiiba?
- b) Waa maxay habka ugu jaban ee lagu iibsado boqoshaa ku filan 2 qof?
- c) Waa maxay habka ugu jaban ee lagu iibsado boqoshaa ku filan 4 qof?
- d) Waa maxay habka ugu jaban ee lagu iibsado boqoshaa ku filan 8 qof?

3) Kee ka mid ah xayaysiisyadan ayaa qiimo (value) wanaagsan u ah lacagta? Sharax jawaabtaada.

Canabka (Pears)
39 p midkiiba

3 £1

Weelasha jalaatada
(Ice cream tubs)
£5.30 midkiiba

4 kasta £21

Sosejiska khudradda
(Veggie sausages)
£2.30 midkiiba

3 kasta £7

4) Cabdi wuxuu arkay xayaysiiskan dukaanka weyn.

Fizzy orange
£1.80 midkiiba

libso 1, hel 1
nus qiimo (half
price)

Markii aan halkan joogay usbuucii hore
waxay ahaayeen £1.30 midkiiba laakiin ma
jirin xayaysiis (promotion).



Ma xayaysiiskani (promotion) wuxuu bixiyaa heshiis ka fiican qiimihii (price) Lucas arkay usbuucii hore?

1) Isticmaal laba hab oo kala duwan si aad u muujiso in baakadaha (packs) 6 roollada ay ka fiican yihiin qiimaha (value for money) marka loo eego baakadaha 4 roollada.

4 baakad oo roollada jilicsan (soft rolls)
90 p

6 baakad oo roollada jilicsan (soft rolls)
£1.20

Helitaanka qiimaha halbeegga (unit price)

Baakadaha 6 ayaa ka fiican qiimaha (value for money). 12 waxay ku kacayaan £2.40 taasoo ka jaban iibsashada baakadaha 4 (£2.70)

Baakadda 6 waxay leedahay qiimo (price) ka jaban roolladkiiba marka waa ka fiican qiimaha (value for money).

2) Caasha waxay u baahan tahay 500 g oo boqoshaada ah (mushrooms) cunto (recipe) loogu talagalay 2 qof.

Bogoshaada 150 g
80 p

Bogoshaada 400 g
£1.10

Bogoshaada 600 g
£1.80

a) Baakad kasta, waa maxay qiimaha (price) 100 garaamkiiba?

$$0.8 \div 1.5 = 0.533\dots$$

Qiyaastii 53.3 p 100 g kasta

$$1.1 \div 4 = 0.275$$

27.5 p 100 g kasta

$$1.8 \div 6 = 0.3$$

30 p 100 g kasta

b) Waa maxay habka ugu jaban ee lagu iibsado boqoshaada ku filan 2 qof?

In kastoo 400 g ay qiime (value) fiican tahay, habka ugu jaban ee lagu helo 500 g waa in la iibsado hal xirmo oo 600 g ah oo qiimihiisu yahay £1.80

2) Caasha waxay u baahan tahay 500 g oo boqoshaada ah cunto karis kuwaas oo quudiya 2 qof.

Booqoshaada 150 g
80 p

Booqoshaada 400 g
£1.10

Booqoshaada 600 g
£1.80

c) Waa maxay habka ugu jaban ee lagu iibsado boqoshaada ku filan 4 qof?

Caasha waxay u baahan doontaa 1000 garaam.

libsashada hal xirmo oo 600 g ah iyo hal xirmo oo 400 g ah
ayaa noqon doonta tan ugu jaban.

d) Waa maxay habka ugu jaban ee lagu iibsado boqoshaada ku filan 8 qof?

Caasha waxay u baahan doontaa 2000 garaam.

Xirmada 400 g ayaa ah qiimaha (value) ugu fiican iyo iibsashada 5 xirmo oo isku mid ah waxay noqon doontaa 2000 g oo dhan, marka wax khasaara ah ma jiraan.

3) Kee ka mid ah horumarintan (promotions) ayaa qiimo (value) fiican u ah? Sharax jawaabtaada.

Canabka 39 p midkiiba	3 £1 ah
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Weelal jalaato (Ice cream tubs) Mid kasta waa £5.30	4 kasta waa £21
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In kasta oo tani ay tahay badbaadin ka sareysa tan pear, waxay ku taal qiime (value) aad u sareeya, marka boqolkiiba badbaadintu waa ka yar tahay. Waxaad kaloo u baahan doontaa meel iyo isticmaalka 4 weel oo jalaato ah.

Tani waxay u egtahay badbaadin macquul ah haddii aad cuni doonto 3 pear ka hor inta aysan xumaamin.

Tani waxay bixisaa qiime (value) waxyar ka fiican lacagta, laakiin ma aha horumar (promotion) wanaagsan daruuri.

3) Kee ka mid ah horumarkan (promotions) ayaa qiimo (value) wanaagsan u ah lacagta? Sharax jawaabtaada.

Sosegyada khudradda
(Veggie sausages)
Mid kasta waa £2.30

3 kasta waa
£7

Horumarku (promotion) wuu ka qaali yahay qiimihii asalka ahaa.

Tani hubaal ma aha qiimo (value) wanaagsan lacagta.

4) Cabdi wuxuu ku arkay horumarkan (promotion) dukaanka weyn.

Fizzy orange

Mid kasta waa £1.80

libso 1, hel 1 nus
qiimo (half price)

Markii aan halkan joogay usbuucii hore
waxay ahaayeen £1.30 mid kasta, laakiin
ma jirin horumar (promotion).



Ma bixintaani waxay bixisaa qiime (value) ka fiican kan Cabdi uu arkay toddobaadkii hore?

Qiimihii (value) toddobaadkii hore, 2 dhalo waxay kici lahaayeen £2.60

libinta mid qiimihiisu (value) buuxa yahay iyo mid kaloo nus qiime (value) ah toddobaadkan, waxay ka dhigan tahay 2 dhalo oo kiciya £2.70

Bixintani ma bixiso kaydin (saving) marka la barbardhigo qiimihii (value) toddobaadkii hore.

Fahamka xayaysiisyada (advertising)



Barbardhiga bixinnada (promotions)



Qiimeynta halbeegga (unit pricing)



Falanqaynta xayaysiisyada (adverts)

Alaabta dukaamada waxay inta badan leeyihiin qiimeynta halbeegga (unit pricing) hoosteeda.

Mararka qaarkood tani waa qiime (value) shay kasta ama qiime (value) garaam kasta ama qiime (value) 100 g kasta

Kee ka mid ah kuwani ayaa qiimihiisu (value) ugu fiican?

Qiimeynta halbeegga (unit pricing) ayaa tan fududaynaysa, waxaan arki karnaa in baakadda 600 g ay ka jaban tahay 100 g kasta

Aan hubinno in qiimeynta halbeegga (unit pricing) ay sax tahay:

Tan waa la soo koobay (rounded) laakiin waxay ku dhowdahay inay sax tahay.

÷ 6		600 g	£3.40		÷ 6
		100 g			

Alaabta dukaamada waxay inta badan leeyihiin qiimeynta halbeegga (unit pricing) hoosteeda.

Mararka qaarkood tani waa qiimaha shay kasta ama qiimaha garaam kasta ama qiimaha 100 g kasta

Strawberries 600 g
£3.40
56.7 p 100 g kasta

Strawberries 400 g
£2.50
62.5 p 100 g kasta

Kee ayaa ka fiican qiimaha (value) lacagta?

Qiimaynta halbeegga (unit pricing) ayaa tan fududaynaysa, waxaan arki karnaa in baakadda 600 g ay ka jaban tahay 100 g kasta

Aan hubinno in qiimaynta halbeegga (unit pricing) ay sax tahay:

Qiimaynta halbeegga (unit pricing) waa sax.

÷ 4	400 g	£2.50	÷ 4
	100 g		

Waa maxay qaladka ku jira qiimaynta halbeegga (unit pricing) ee shukulaatadan?

5 baakad oo shukulaato ah

£2.15

0.4 p mid kasta

4 baakad oo shukulaato ah

£1.75

0.4 p mid kasta

Marka hore, halbeegyadu waa qaldan yihiin. Iyada oo aan xisaabin, waxaan ognahay in shukulaato kasta aysan ka yarayn nus pence!

Qiimaha ayaa sidoo kale la soo koobay. Waxaan arki karnaa in 5 baakad ay ka fiican tahay qiimaha (value) lacagta, laakiin marka la soo koobo 10 pence ugu dhow, waxay u eg yihiin kuwa isku midka ah.

Hadda kuwan ayaa fudud in la isbarbardhigo, in kastoo ogaada in 5 baakad ay kuu badbaadinayso wax ka yar pence shukulaato kasta, marka laga yaabo inaysan u qalmin.

Baakado badan oo crisps ah 6 baakad $\times$ 30g

£1.35

0.8 p mid kasta

Waxaan arkay calaamaddan maalin ka hor.
Ma fahmayo waxa '0.8 p each' tilmaamayo.

Layla



Waxay u badan tahay qiimaha
(price) bac kasta, sababtoo ah
kani waa 6 pk oo crisps ah.

Iyada oo aan xisaabin, waxaan arki karnaa kani ma aha qiimo (price) macquul ah oo
bac crisps ah.



Cabdi

Waxaa laga yaabaa inay khaldeen halbeegyada
(units) oo ay tahay £0.8 bac kasta?

Crisps badan 6 pk × 30g

£1.35

0.8 p mid kasta

Ma arki kartaa waxa 0.8 p tilmaamayo?

180 garaam oo crisps ah ayaa guud ahaan jira.

Layla



Mararka qaarkood qiimaynta halbeegga (unit pricing) waa qiimaha (price) garaamkiiba ama 100 g ama 1 kg.

Ku soo wareejinta (Rounding) hal meel jajib tobanle (decimal place) wuxuu bixiyaa 0.8 p

Marka kani waa qiimaha (price) garaamkiiba ee crisps.

Marka la barbar dhigo qiimaynta halbeegga (unit pricing), waxaa muhiim ah in la hubiyo halbeegyada (units).

Kee ka mid ah kuwani ayaa ugu fiican qiimaha (value) lacagta?

2 pk oo saabuun dharka ah
(500 ml mid kasta)
£1.70
85 p mid kasta

Dhaqid dareere (800 ml)
£1
12.5 p 100 ml kii

Dhaqid dareere (1.2 l)
£1.80
£1.50 litirkiiba

Dhalada 800 ml ee £1 ayaa ugu fiican qiimaha.

1) Kuwee ka mid ah qiimayntan halbeegga ayaa sax ah?

Strawberry (400 g)

£1.89

£4.73 kg kii

Basasha yaryar ee Silverskin (440 g)

79 p

31 p 100 g kii

Laba xirmo oo Mango ah

£1.79

89 p midkiiba

Waraaqda lagu duubo (20 m)

99 p

4 p mitirkiiba

Jawaabaha:

c) a) b) d)

2) Kuwee ka mid ah ayaa ugu fiican qiimaha?

Crisps 6 pk × 25 g

£1.25

0.83 p per gram

Crisps 4 pk × 30 g

£1

25 p each

Crisps 15 pk × 30 g

£3.80

£0.84 per 100 g

1) Kee yaal ka mid ah qiimaynta halbeegga (unit pricing) waa sax?

a)

Strawberries (400 g)
£1.89

£4.73 per kg

$$1.89 \div 4 = 0.4725$$

Sax ilaa 2 d.p.

$$0.4725 \times 10 = 4.725$$

b)

Twin pack Mango
£1.79

89 p each

Qawaacinta wareejinta (Rounding conventions) waxay ka dhigan tahay in kani yahay 90 p

$$1.79 \div 2 = 0.895$$

89.5 p

c)

Silverskin onions (440 g)
79 p

31 p per 100 g

Tani waxay noqon kartaa kiis ay cufku (mass) yahay marka la miiro.

$$79 \div 4.4 = 17.95$$

Khalad

d)

Wrapping foil (20 m)
99 p

4 p per metre

Tani waxay ku dhowdahay 5 p halkii 4 p, marka waa khalad.

$$99 \div 20 = 4.95$$

2) Kee yaal ka mid ah kuwan ayaa ugu qiimo wanaagsan (best value for money)?

Crisps 6 pk $\times$ 25 g

£1.25

0.83 p halkii garaam (per gram)

Crisps 4 pk $\times$ 30 g

£1

25 p midkiiba (each)

Crisps 15 pk $\times$ 30 g

£3.80

£0.84 halkii 100 g (per 100 g)

83.33... p halkii 100 g (per 100 g)

25 p 30 g ah

84.44... p 100 g ah

8.333... p 10 g ah

83.33... p 100 g ah

Labada 6 pk iyo 4 pk ee crisps ayaa ah qiimaha ugu fiican (best value for money).

Fahamka xayaysiiska (Understanding advertising)



Isbarbardhigga xayaysiisyada (Comparing promotions)



Qiimeynta halbeegga (Cutubka pricing)



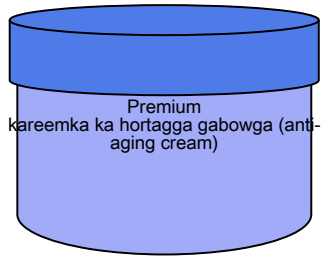
Falanqaynta xayaysiisyada (Analysing adverts)

Xayaysiisyada waxaa loo qaabeeyey inay dadka ku qanciyaan inay wax iibsadaan (make a purchase).

Tirakoobka (Statistics) waa qalab awood leh oo ku jira xayaysiiska.

Waxaa muhiim ah in la fahmo qaar ka mid ah siyaabaha tirakoobka (statistics) loo marin habaabin karo (manipulated).

'90% macaamiisha ayaa arkay
laalaabyo yar.'



Maxaad u malaynaysaa in xayaysiintani ay isticmaasho tirakoobkan?

- 90% waxay u egtahay tiro cajiib ah.
- Waxay ka dhigaysaa mid saynis ah sida cilmi-baaris loo sameeyay oo ay caddaynayso inay shaqeyso.
- Dadku waxay u badan tahay inay iibsadaan haddii ay u maleeyaan inay dadka kale ku taliyeen.

Waxaa jira siyaabo tirakoobkani uu u khiyaanayn karo.

Marka hore, haddii 48 qof la waydiiyay, imisa ayay tahay 90%?

Tani ma aha tiro dhammaystiran (integer) sidaas darteed waxaa suurtagal ah inay tahay 90% si sax ah inay arkaan laalaabyo yar. Tani waxay u badan tahay inay tahay tiro wareegsan.

'90% macaamiisha ayaa arkay
laalaabyo yar.'*



*oo ah 48 la waydiiyay

Tusaale ahaan haddii 41 ka mid ah 48 macaamiil ay si togan uga jawaabeen:

$$\frac{41}{48} = 85.41...\%$$

Tani waxay ku wareegi doontaa 90% ilaa 1 s.f. inkastoo ay ku dhowdahay 85% ilaa 2 s.f.

Waa kuwan waxyaabo kale oo lagu tixgeliyo:

- Cabbirka muunadda (sample size) ee 48 waa mid aad u yar. Ma waxaa sabab u ah in dad badan oo jawaabay ama shirkaddu waxay rabtay inay maareyso xogta?
- Ma naqaanno cidda la waydiiyay. Haddii ay ahaayeen dad da'yar oo aan lahayn laalaabyo badan, tani waxay noqon kartaa mid khiyaanaysan.
- Dadka ugu badan ee jawaabta ka bixinaya sahankan waa dadka si joogta ah u isticmaala oo jecla alaabta.
- Ma naqaanno sida su'aasha loo qaabeeyay ama muddada la tijaabiyay.

Aan eegno xayeysiis kale.

“Gawaarida Carl waa summada gawaarida ugu dhaqsaha badan ee ku koraysa Boqortooyada Midowday!”



Ku biir xamaasadda cusub, iibso gawaarida Carl.

Maxaad u malaynaysaa in xayeysiiskan uu adeegsaday sheegashadan?

- Haddii summadu si dhakhso leh u korayso, waxay soo jeedinaysaa inay tahay shirkad wanaagsan oo dadku jeclaadaan.
- Waxay rafcaan u qaadaysaa dareenka dadka ee ah inaysan rabin inay ka dheeraadaan waxa qof kastaa haysto.
- Waxay ka dhigaysaa summada mid u eg inay tahay mid cusub oo hal abuur leh oo laga yaabo inay haysato wax aanay qabaan summada kale.

Aan eegno xayeysiis kale.

“Gawaarida Carl waa summada gawaarida ugu dhaqsaha badan ee ku koraysa Boqortooyada Midowday!”



Ku biir xamaasadda cusub, iibso gawaarida Carl.

Gawaarida Carl waxay adeegsadeen tirooyinkan si ay u taageeraan sheegashadooda:

Sannad	Tirada macaamiisha
1	2850
2	8620
3	25 910

Caasha

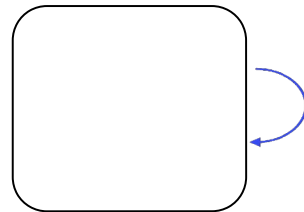


Laakiin waxaan hadda helay shirkad kale oo gawaarida ah oo macaamiishoodu kordheen 400 000 ilaa 480 000 sannadkii hore.

Marka ma been bay tahay sheegashada Gawaarida Carl?

Dhibaatudu waxay ku taallaa farqiga u dhexeeya korodhka tiro (numerical increase) iyo korodhka boqolkiiba (percentage increase).

Sannad (Year)	Tirada macaamiisha (Number of customers)
1	2850
2	8620
3	25 910



Shirkadda Caasha heshay waxay heshay macaamiil cusub oo ka badan sannadkii hore marka loo eego Gawaarida Carl.

Waa maxay korodhka boqolkiiba (percentage increase) labada shirkadood?

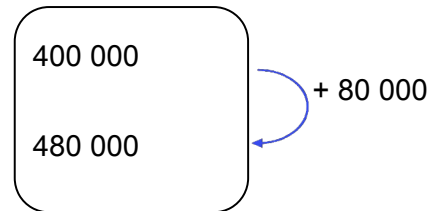
Gawaarida Cabdi waxay ku kordhayaan heer 200% sanadkii!

Dhibaataadu waxay tahay farqiga u dhexeeya kordhinta tirada (numerical increase) iyo kordhinta boqolleyda (percentage increase).

Sannad (Year)	Tirada macaamiisha (Number of customers)
1	2850
2	8620
3	25 910

+ 5770

+ 17 290



Shirkadda Caasha heshay macaamiil cusub oo ka badan sannadkii hore marka loo eego Gawaarida Cabdi.

Waa maxay kordhinta boqolleyda (percentage increase) labada shirkad?

$$80\,000 \div 400\,000 = 0.2$$

Shirkadda kale waxay ku kordhaysaa heer 20% sannadkii.

Waa kuwan waxyaabo kale oo la tixgeliyo:

- Gawaarida Cabdi waxay u muuqdeen shirkad cusub, way fududahay in la helo kordhin boqolley oo weyn haddii aad ka bilowdo tiro aad u yar.
- Waxay ahayd sannadkiisii 3aad, macquul ma aha in heerkan kordhintu sii socdo.
- Shirkaduhu waxay u badan tahay inay doortaan tirakoobka ugu fiican; taas waxay noqon kartaa tiro cayiman (raw figure) ama boqolley (percentage).

Shirkad waxay weydiisay 40 qof waxayna sheegtay in 95% dadku ay ku talinayaan. Immisa qof ayaa kani yahay?

Sheeg sababta sheegashadan (claim) looga yaabo inaysan qancin sida ay u muuqato.

- Haddii kani yahay badeecad qaran ama caalami ah, cabbirka muunadda (sample size) ee 40 waa mid yar.
- Ma hayno macluumaad ku saabsan cidda la sahmiyay.
- Ma naqaanno sida su'aasha loo weydiiyay; qaab cayiman ama weydiinta dadka qof ahaan waxay keeni kartaa jawaabo ka fiican.

Faa'iidada shirkaddu waxay ka kacday £24 000 sannadkii 1 ilaa £28 000 sannadkii 2. Waa maxay tan korodhka boqolleyda (percentage increase)?

$$4000 \div 24\,000 = 0.1666\dots$$

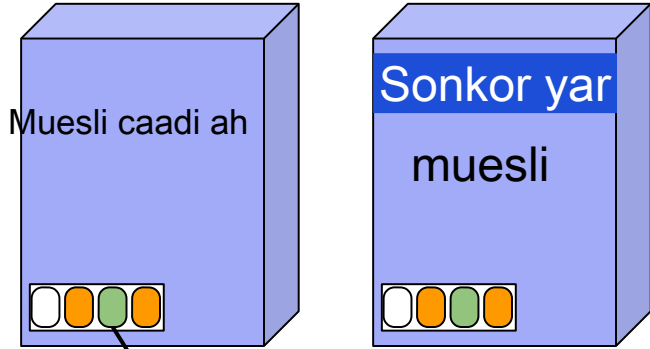
Qiyaastii 16.7% korodh.

Faa'iidada shirkaddu waxay ka dhacday £15 000 sannadkii 1 ilaa £13 500 sannadkii 2. Waa maxay tan hoos u dhaca boqolleyda (percentage decrease)?

$$1500 \div 15\,000 = 0.1$$

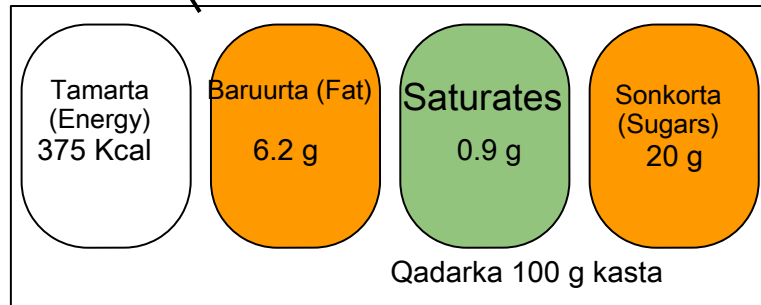
10% hoos u dhac.

1) Sanduuqa 'sonkor yar' ee muesli wuxuu xayeysiiyaa 20% sonkor ka yar.



a) Immisa sonkor ayaa ku jiri doonta 100 g oo muesli sonkor yar ah?

b) Haddii qaaddo (teaspoon) yar tahay 4.2 garaam, immisa qaaddo oo sonkor ah ayaa ku jira 30 garaam oo muesli sonkor yar ah?



c) Nooc kale oo muesli ah ayaa xayeysiiya 5.5 g oo sonkor ah 40 garaam qayb kasta. Kee muesli ayaa leh sonkorta ugu yar?

2) Roy's rides wuxuu sameeyaa oo iibiyaa mootooyinka. Xayeysiiskoodu wuxuu sheegayaa:

Mootooyinkayagu waxay si fiican u haystaan qiimahooda (value) marka loo eego kuwa la tartamaya.

a) Celceliska hoos u dhaca qiimaha (value) mootada sanadkiisa koowaad waa 20%. Mooto qiimaheedu yahay £2500 markay cusub tahay, waa imisa sanad ka dib?

Waa kuwan tirooyinka qiimaha (value) mootada ee Roy's rides iyo mootada ay la tartamayaan.

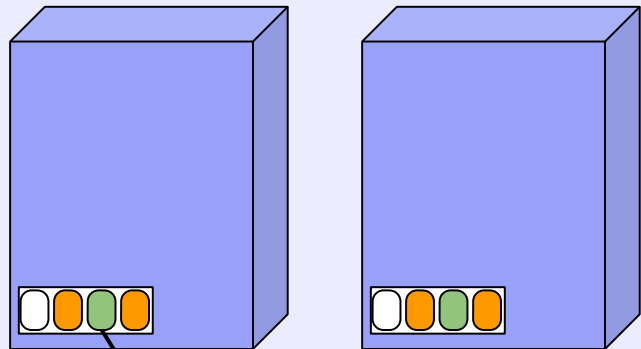
	Roy's rides
Cusub (New)	£1800
1 sano (1 yr old)	£1350

	Tartame (Competitor)
Cusub (New)	£5200
1 sano (1 yr old)	£4420

b) Bixi tiro (statistic) taageeraya sheegashada Roy's rides

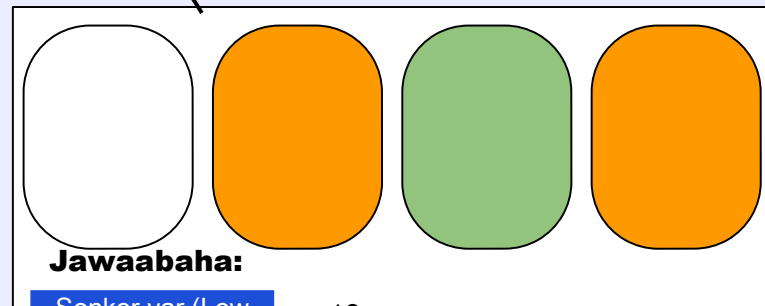
c) Bixi tiro (statistic) aan taageerayn sheegashada.

1) Sanduuqa 'sokor yar' ee muesli wuxuu xayeysiiyaa 20% sokor ka yar.



a) Immisa sokor ayaa ku jiri doonta 100 g oo ah muesli sokor yar (low sugar muesli)?

b) Haddii qaaddo (teaspoon) yari tahay 4.2 garaam, immisa qaaddo oo yar (teaspoons) oo sokor ah ayaa ku jira 30 garaam oo ah muesli sokor yar (low sugar muesli)?



30 garaam oo la cuno waxaa ku jira 4.8 g oo sokor ah

Taasi waa in ka yar hal qaaddo oo yar (teaspoon) oo sokor ah (1.14...)

$1 \frac{1}{7}$

Muesli caadi ah
(Normal muesli)
6.2 g

muesli
0.9 g

Tamarta
(Energy)
20 g

Sokor yar (Low sugar)
Baruurta (Fat)

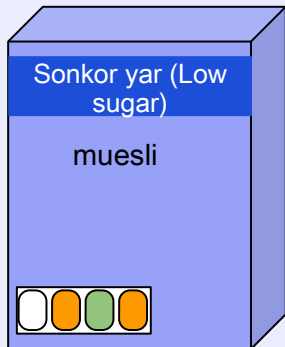
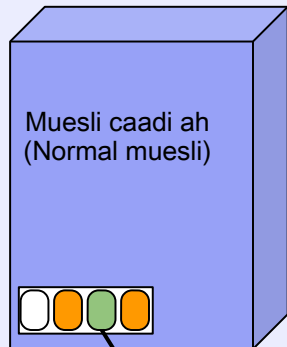
Saturates

Sokorta
(Sugars)

375 Kcal

Qadarka 100 g (Amounts Per 100 g)

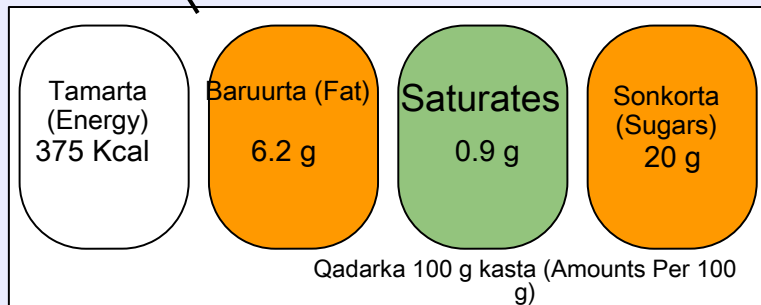
1) Sanduuqa 'sonkor yar' (low sugar) ee muesli wuxuu xayeysiiyaa 20% sonkor ka yar.



c) Nooc kale oo muesli ah ayaa xayeysiiyaa 5.5 g oo sonkor ah 40 garaam oo la cuno. Kee muesli ayaa leh sonkorta ugu yar?

5.5 g oo sonkor ah 40 g waa 13.75 g oo sonkor ah 100 g.

Tani waa sonkor ka yar marka loo eego nooca 'sonkor yar' (low sugar) ee muesli asalka ah.



2) Roy's rides wuxuu sameeyaa oo iibiyaa mootooyinka (motorbikes). Xayeysiintoodu waxay sheegaysaa:

Mootooyinkayagu waxay si fiican u hayaan qiimahooda (value) marka loo eego kuwa aan la tartamo.

a) Celceliska hoos u dhaca qiimaha (value) mootada sanadkiisa koowaad waa 20%. Mooto qiimaheedu yahay £2500 marka cusub, waa imisa sanad ka dib?

$$2500 \times 0.8 = 2000$$

Sanad ka dib qiimuhu (value) wuxuu noqonayaa £2000

2) Roy's rides wuxuu sameeyaa oo iibiyaa mootooyin. Xayeysiintoodu waxay sheegaysaa:

Mootooyinkayagu waxay si fiican u hayaan qiimahooda (value) marka loo eego kuwa aan la tartamo.

Waa kuwan tirooyinka qiimaha (value) mootada Roy's rides iyo mootada ay la tartamaan ee ugu dhow.

	Roy's rides
Cusub (New)	£1800
1 sano (1 year old)	£1350
Bixiyaalkoob (Statistic)	$1800 - 50 = 1750$

b) Bixiyaalkoob (statistic) taageerta sheegashada Roy's rides
 $1800 - 50 = 1750$

	Tartame (Competitor)
Cusub (New)	£5200
1 sano (1 year old)	£4420
Bixiyaalkoob (Statistic)	$5200 - 120 = 5080$

Bixiyaalkoob (statistic) taageerta sheegashada Roy's rides
 $5200 - 120 = 5080$

Waxaa jira hoos u dhac yar oo ku yimaada qiimaha (value) mootada Roy's rides marka loo eego tan ay la tartamaan.

2) Roy's rides wuxuu sameeyaa oo iibiyaa mootooyin. Xayeysiintoodu waxay sheegaysaa:

Mootooyinkayagu waxay si fiican u hayaan qiimahooda (value) marka loo eego kuwa ka soo horjeeda (competitors).

Waa kuwan tirooyinka qiimaha (value) mooto ee Roy's rides iyo mooto ee ka soo horjeeda (competitor) ee ugu dhow.

	Roy's rides
Cusub (New)	£1800
1 sano jir (1-yr old)	£1350

c) Bixi (ratio) (statistic) aan taageerin sheegashada.

$$1350 \div 1800 = 0.75 \text{ (25\% hoos u dhac)}$$

	Ka soo horjeeda (Competitor)
Cusub (New)	£5200
1 sano jir (1-yr old)	£4420

$$4420 \div 5200 = 0.85 \text{ (15\% hoos u dhac)}$$

Mootada Roy's rides waxay ahayd mid ka jaban marka hore. Waxay hoos u dhacday 25% halka tan tartanku ay hoos u dhacday 15%.

Xirfadaha saamiga (proportion) waxaa loo isticmaali karaa in lagu barbar dhigo qiimaha (prices).

Xayaysiisyada (promotions) had iyo jeer ma bixiyaan qiimaha (value) ugu fiican ee lacagta.

Dukaamadu inta badan waxay soo bandhigaan 'qiimaha halbeegga' (unit prices) si ay kuu caawiyaan inaad barbar dhigtid alaabta, laakiin kuwani had iyo jeer kuma wada jiraan halbeegyo (units) isku mid ah.

Xayaysiisyada (advertisements) inta badan waxay adeegsadaan xog (data).

Ansaxnimada (validity) xogta (data) iyo gabagabada (conclusions) waa in aan loo qaadin inay sax yihiin.