Kia ‘akakī‘ia e te tangata te tārērē‘ia nei

NSN

Te Numero o te ‘Āpi‘i (School Code)

NA TE ARONGA ‘AKATERETERE I TE TĀRĒRĒ‘ANGA ANAKE

See the back page for an English translation of this cover

Tikoti‘ia a roto i te pi‘a (☒) me KĀRE KOE i tātā ana ki roto i teia puka

32406C TU‘ANGA-‘ĀPI‘I 3

Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Numero 2024

32406C Ta‘anga‘anga‘ia te numero, e te statistics ki roto i te au mea mātau‘ia na roto i te au ra tātakita‘i

Credits: Ta‘i nga‘uru

TE AU MEA TEI TUPU	
1	‘Anga‘ia te au rāvenga numero, e te statistical, no te ‘akatanotano‘anga i te au manatā, i roto i te au mea mātau‘ia na roto i te au ra tātakita‘i.
2	Ta‘anga‘anga‘ia te au numero, e te statistics kia tau ki te au anoano numero, i roto i te au mea mātau‘ia na roto i te au ra tātakita‘i.
3	‘Akamārama‘ia te au pa‘u‘anga numero, e te statistical, no runga i te au turanga.

Tukuna‘ia to‘ou National Student Number (NSN), e te School Code, ki roto i te ātea i runga ake nei.

E tau kia tāmata koe i te au ui‘anga POUROA, i roto i teia puka.

Me te anoano ra koe i teta‘i ngā‘i ke atu no teta‘i pa‘u‘anga, ta‘anga‘anga‘ia te ātea tei ‘ōronga‘ia atu, i muri ake i teia puka.

‘Ākara meitaki me kua tano te ‘akapapa‘anga‘ia te au kapi o teia puka 2–43, e kāre ‘okota‘i o teia au kapi, i ‘akangaropoina‘ia.

‘Auraka e tātā ki roto i te au tapa (margins) (////). Ka tīpu‘ia teia ngā‘i, me māka‘ia te puka.

KIA ‘ŌRONGA ATU KOE I TEIA PUKA, KI TE TANGATA ‘AKATERETERE I TE TĀRĒRĒ, ME OTI TEIA TĀRĒRĒ‘ANGA.

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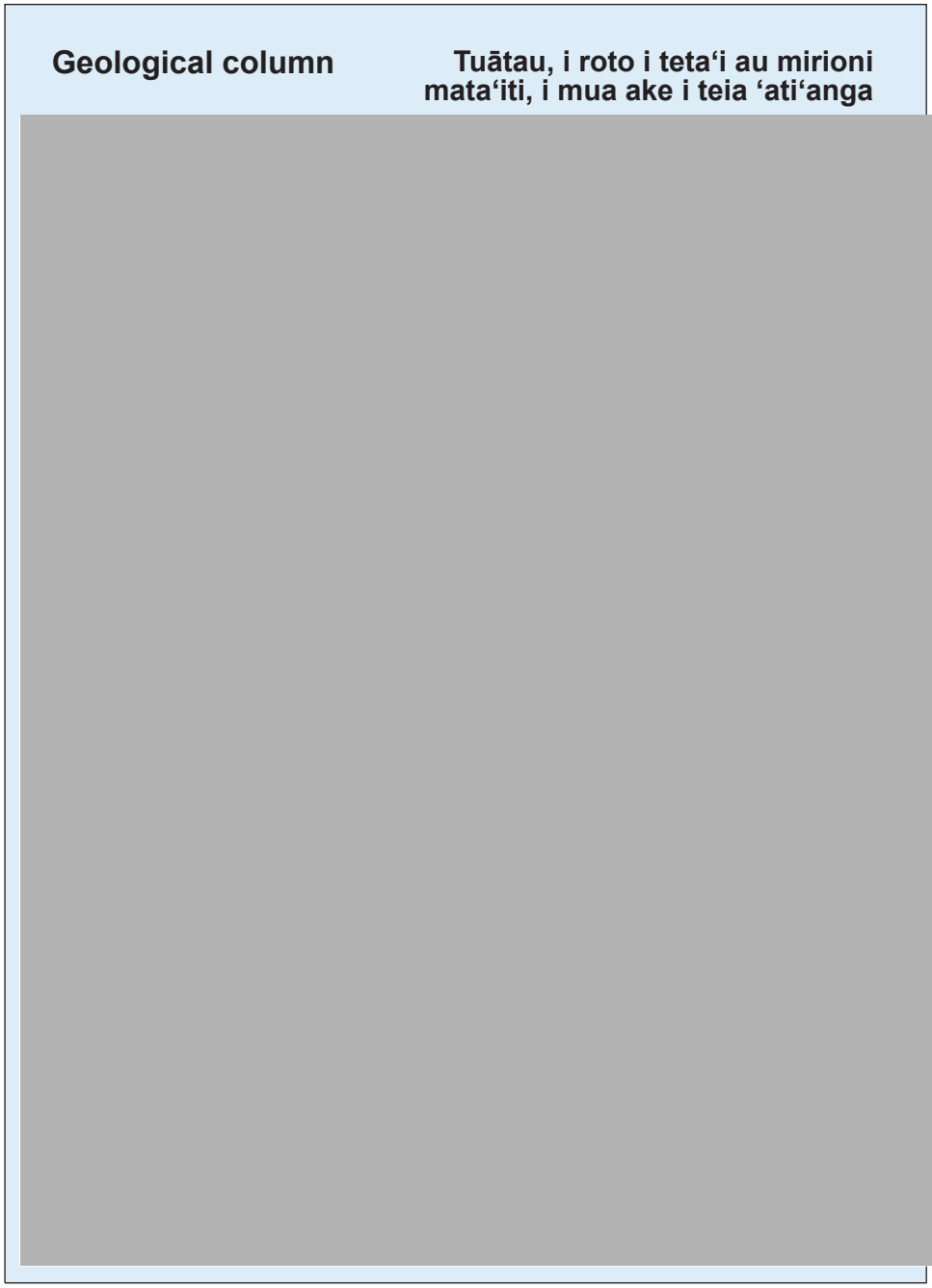
Kāre teta‘i ‘ua atu tu‘anga o teia tātā‘anga, e ‘akatika‘ia kia kapinga‘ia, me kāre te New Zealand Qualifications Authority, i ‘akatika.

UIʻANGA TAʻI: Te au ʻonu

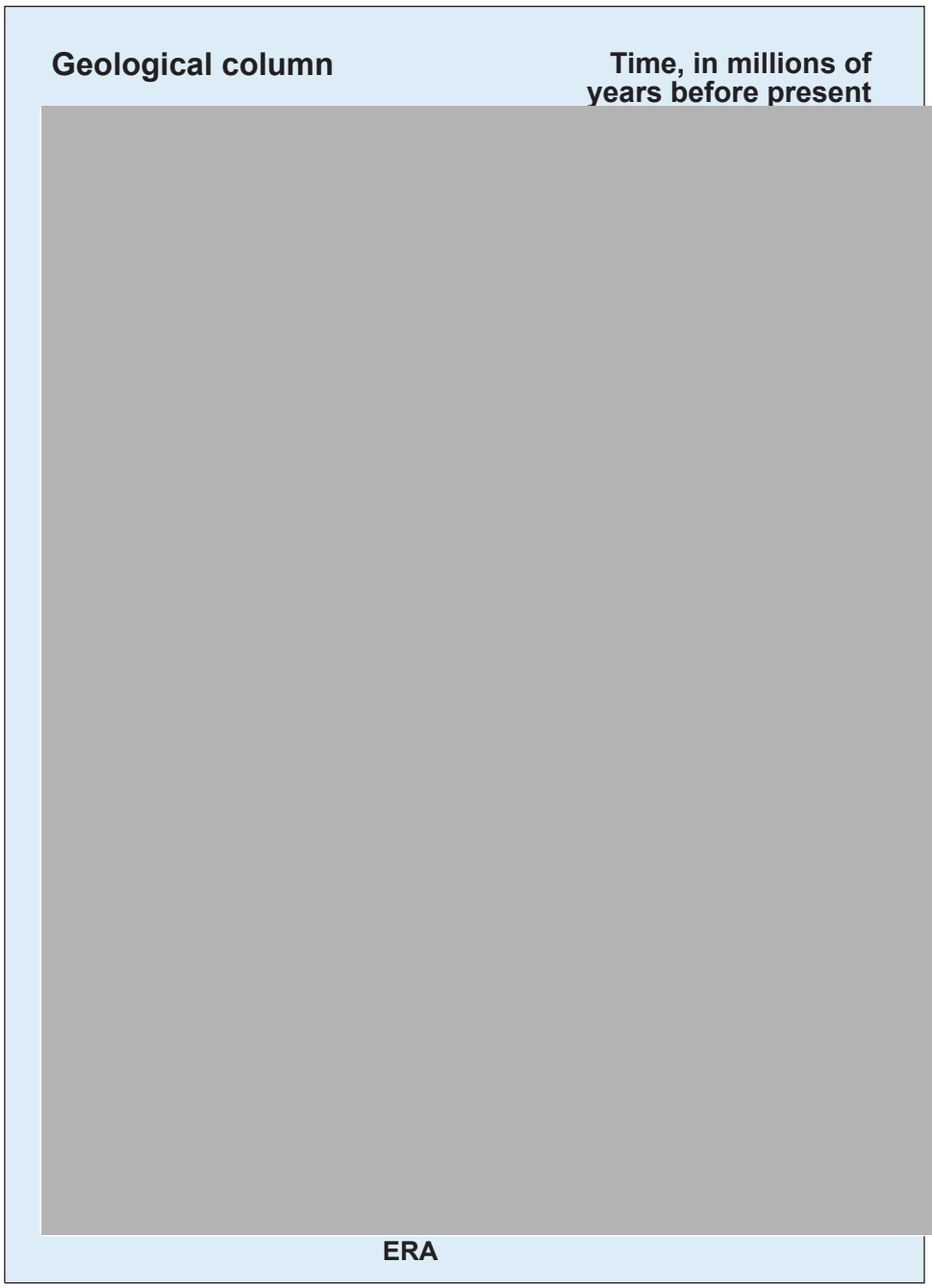
E oraʻanga to te au ʻonu mua, i roto i tetaʻi 230 mirioni mataʻiti i topa.



(a) Te ora āinei te ʻonu, i te tuātau o te dinosaurs? Taʻangaʻangaʻia te ʻakakitekiteʻanga mei runga i te māpu, i te ʻakamāramaʻanga i taʻau paʻuʻanga.

QUESTION ONE: Turtles

The first turtles lived around 230 million years ago.



(a) Did turtles live around the same time as dinosaurs? Use information from the chart to explain your answer.

Teia nga ara mua o teta‘i ‘akakitekite‘anga, tei ‘akapapa‘ia. E 1000 ‘onu i roto i te katoa‘anga o te ‘akapapa‘anga.

Species	U‘a/Toa	Te roāngarere o te anga-‘onu (cm)	Te teima‘a (kg)
Green	U‘a	87	108
Loggerhead	Toa	76	89
Green	Toa	123	145
Hawksbill	U‘a	65	71
Hawksbill	U‘a	54	64
Loggerhead	Toa	81	93

(b) Tātā‘ia teta‘i ui‘anga te ka rauka i te pa‘u, na roto i te ta‘anga‘anga‘anga i te ‘akakitekite‘anga mei roto mai i teia ‘akapapa‘anga.

‘Okota‘i anake punua ‘onu, mei roto i te 100, te ka ora, kia tupu mai ei ‘onu ma‘atama‘ata.

(c) Ko te‘ea decimal i roto i te ‘irinaki‘anga e, ‘okota‘i i roto i te 100?

Pata‘ia (✓) te pa‘u‘anga tano.

◯ 1.0 ◯ 0.1 ◯ 0.01 ◯ 0.001 ◯ 0.0001

Here are the first few rows of a data set. There are 1000 turtles in the whole table.

Species	Gender	Shell length (cm)	Weight (kg)
Green	Female	87	108
Loggerhead	Male	76	89
Green	Male	123	145
Hawksbill	Female	65	71
Hawksbill	Female	54	64
Loggerhead	Male	81	93

(b) Write a question that could be answered using information from this table.

Only one in every 100 baby turtles survive to become adults.

(c) Which decimal is the probability of a one in 100 chance?

Tick (✓) the correct answer.

○ 1.0 ○ 0.1 ○ 0.01 ○ 0.001 ○ 0.0001

Te ʻakaāri mai nei teia graph, i te tārēʻanga, e te au tu ʻonu, tei kiteaʻia i Vītī, i roto i te tuātau māʻū, e te marō.

Te tārēʻanga, e te au tu ʻonu tei kiteaʻia i Vītī

Te taʻangaʻanga nei tetaʻi nūtipēpa Vītī, i te au tārēʻanga mei roto mai i te tuātau marō, i te karanga e:

"E 23 anake ʻonu Hawksbill tei kiteaʻia. Te ʻirinakiʻia nei e, ka ngaro teia tu ʻonu mei roto i to tātou moana."

(d) Te ʻakatika āinei koe? Taʻangaʻangaʻia te ʻakakitekiteʻanga mei roto mai i te graph, i te ʻakamārama i taʻau paʻuʻanga.

This graph shows the numbers and types of turtles found in Fiji, in the wet and dry seasons.

Numbers and types of turtles found in Fiji

A Fiji newspaper uses the figures from the dry season to claim:

"Only 23 Hawksbill turtles were found. This species is at risk of extinction in our waters."

(d) Do you agree? Use information from the graph to explain your answer.

Kua ʻangaʻia teia ʻakapapaʻanga, na roto i te ʻakaʻokiʻokiʻanga i te ʻākaraʻanga o te ʻonu.

(e) Ko teʻea ʻakapapaʻanga i roto i te piʻa, tei ʻāiteite ki te ʻakapapaʻanga ʻonu?

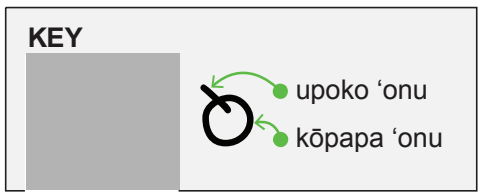
Takoropiniʻia ◯ te paʻuʻanga tano.

(i)

(ii)

(iii)

(iv)



Ka anoano te ʻonu, kia maʻata te vai i roto i to rātou tāngika.

No te **ʻokotaʻi centimetre tātakitaʻi** o te roāngarere i te anga o te ʻonu, kia ki te tāngika i te 15 rīta vai

(f) Eaʻa i reira, te maʻata o te vai, ka anoano teia ʻonu, ki roto i tōna tāngika?

_____ rīta

Te vāitoʻanga i te anga o te ʻonu.

This pattern is made using a repeating turtle figure.

(e) Which pattern in the box below matches the turtle pattern?

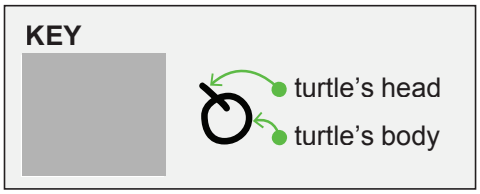
Circle the correct answer.

(i)

(ii)

(iii)

(iv)

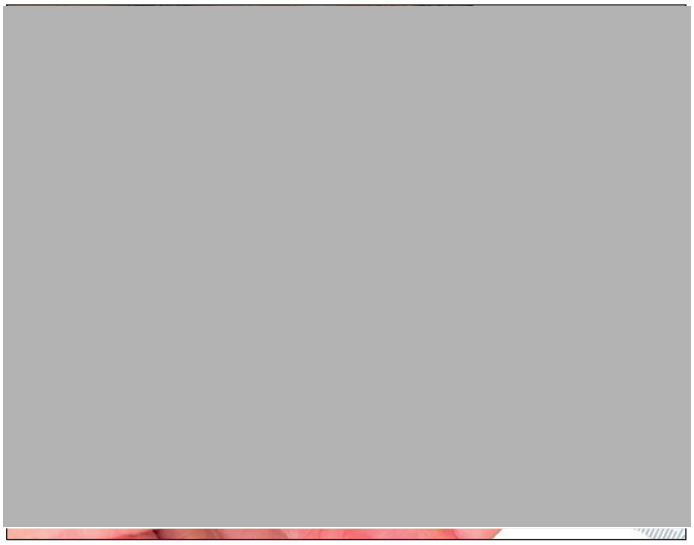


Turtles need a lot of water in their tank.

For **every centimetre** of the turtle's shell length, the tank must hold 15 litres of water.

(f) How much water will this turtle need in its tank?

_____ litres



Measuring a turtle's shell.

UI‘ANGA RUA: Te au mea ‘oko māmā i ko i te op shop

Ko te op shop, te ngā‘i e ‘oko ana te tangata i te au mea tei ta‘anga‘anga takere ‘ia ana. Teia te au arataki‘anga no te ‘aere atu ki teta‘i op shop.

(a) Me ka pou teta‘i 12 miniti no te ‘aere‘anga na raro, no te ‘okota‘i kiromita, ‘ē‘ia i reira kiromita, te ka rauka iā koe i te ‘aere, i roto i te ‘okota‘i ora?

_____ km

Teia te moni no teta‘i piripou kāupoe, i ko i te op shop. E $120.00 te tutaki no teia au piripou kāupoe, i te ‘ōu‘anga.

(b) ‘Ea‘a te patene **o te tutaki i te piripou kāupoe ‘ōu**, ki te tutaki a te op shop?

_____ %

QUESTION TWO: Bargains at the op shop

An op shop is a place where people buy things that are recycled. Here are directions to get to an op shop.

(a) If walking one kilometre takes 12 minutes, how many kilometres can you walk in one hour?

_____ km

Here is the price of a pair of jeans at the op shop. These jeans are priced at $120 when new.

(b) What percentage **of the new price for jeans**, is the op shop price?

_____ %

Teia te tūtū no teta‘i mereki.

(c) (i) E **reflectional** (i‘o) symmetry, āinei to te katoa‘anga o te mereki?

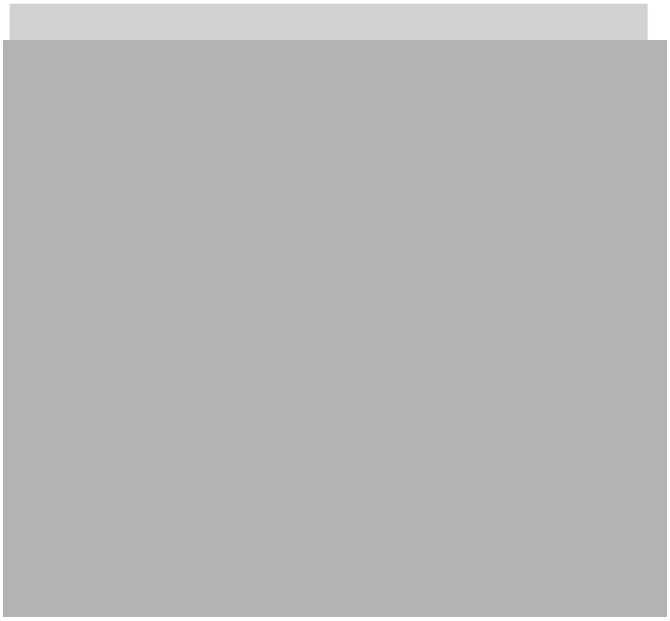
Pata‘ia (✓) te pa‘u‘anga tano.

‘Āe ◯ Kāre ◯

(ii) E **rotational** (‘uri‘ia) symmetry, āinei to te katoa‘anga o te mereki?

Pata‘ia (✓) te pa‘u‘anga tano.

‘Āe ◯ Kāre ◯



Tei roto i te op shop, teta‘i ro‘i-ma‘ata (double bed).

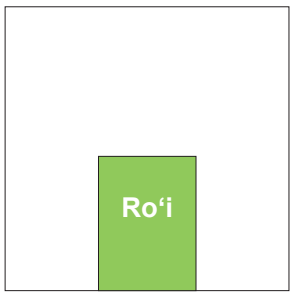
E 1.37 m te ‘a‘ano, ē, e 1.88 m te kokota.

E 3.5 m × 3.5 m, te vāito o te pi‘a-moe.

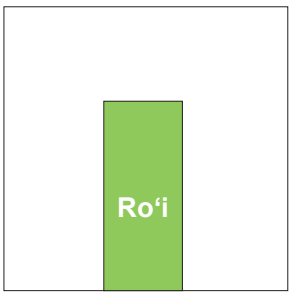
(d) Ko te‘ea te parāni meitaki rava atu, te ‘akaāri mai nei e, ka ō te ro‘i-ma‘ata (double bed), ki roto i te pi‘a-moe?

Pata‘ia (✓) te pa‘u‘anga tano.

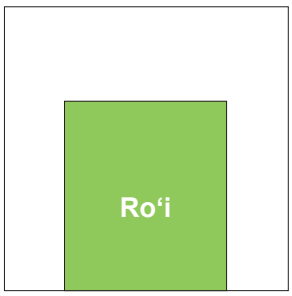
(i) ◯



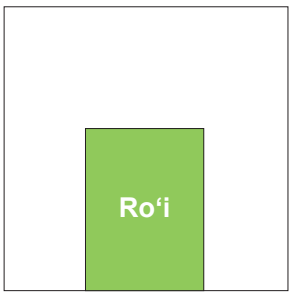
(ii) ◯



(iii) ◯



(iv) ◯



Here is an image of a plate.

(c) (i) Does the whole plate have **reflectional** (mirror) symmetry?

Tick (✓) the correct answer.

Yes ◯ No ◯

(ii) Does the whole plate have **rotational** (turn) symmetry?

Tick (✓) the correct answer.

Yes ◯ No ◯

In the op shop, there is a double bed.

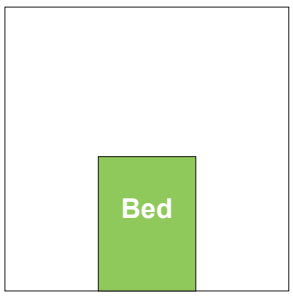
It measures 1.37 m across and 1.88 m long.

A bedroom measures 3.5 m × 3.5 m.

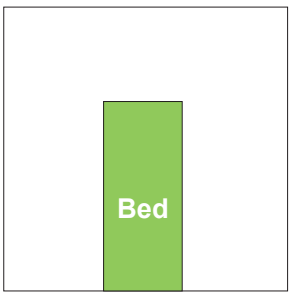
(d) Which diagram best shows how the double bed will fit in the bedroom?

Tick (✓) the correct answer.

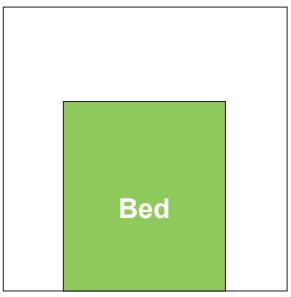
(i) ◯



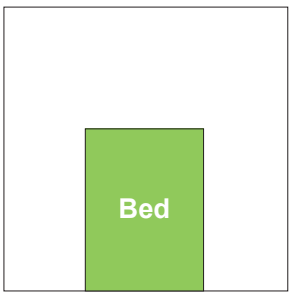
(ii) ◯



(iii) ◯



(iv) ◯



Ka ō ki roto i teia tiā, teta‘i 20 karāti vai.

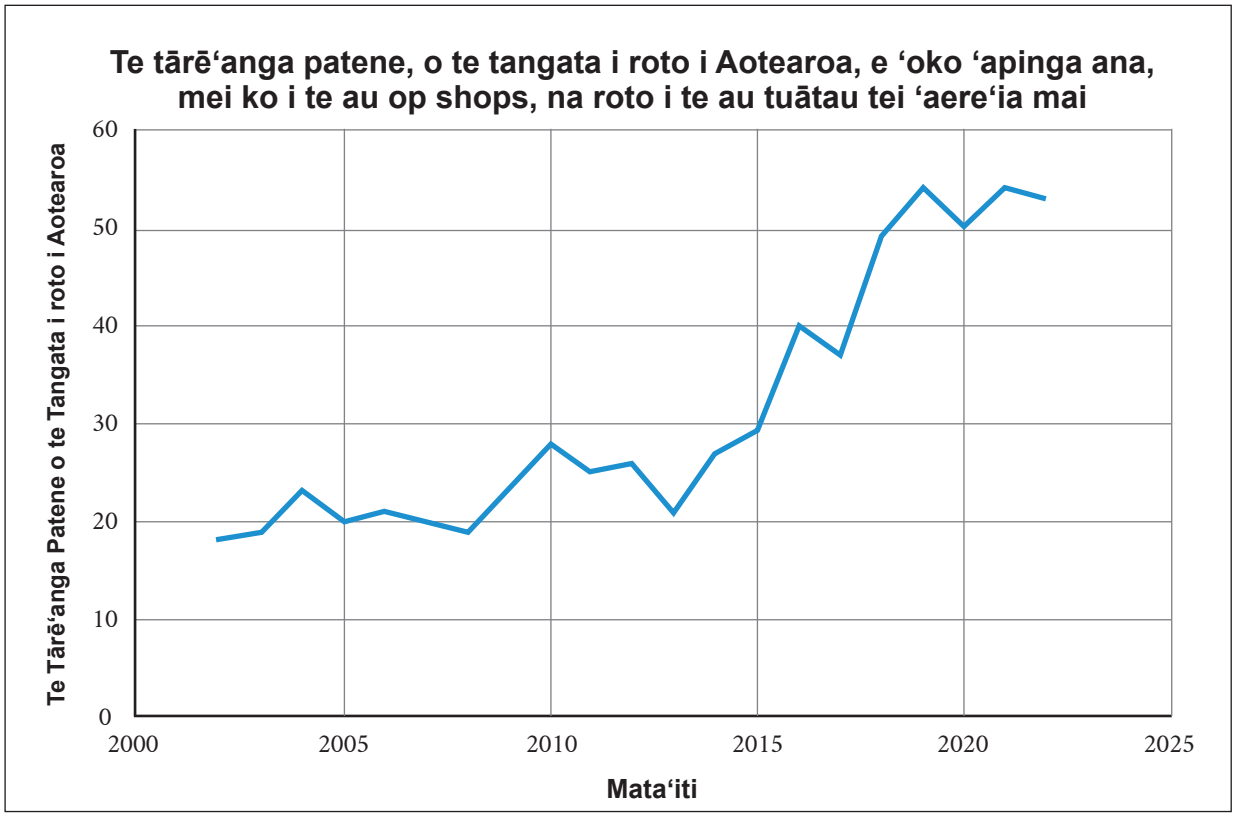
Ka ō ki roto i te karāti, teta‘i 250 mL vai.

(e) E‘ia i reira **rīta** vai, te ka ō ki roto i te tiā?

_____ rīta

Te karanga nei teta‘i tangata ‘akakitekite tuatua i runga i te pi‘a-tūtū e, kua taki-toru te ma‘ata o te tangata o Aotearoa, te ‘oko ‘apinga nei, mei roto i te au op shops, i roto i teta‘i 20 mata‘iti, mei te mata‘iti 2002 ki te mata‘iti 2022.

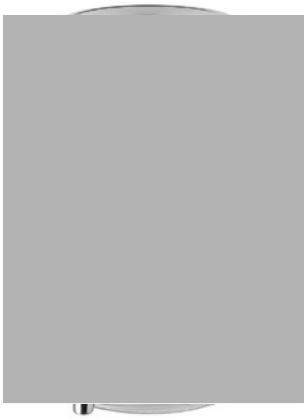
‘Akamatakite‘anga: Kia toru te ma‘ata‘anga, te ‘āite‘anga o te “Taki-toru”.



(f) Kua tano āinei, ta te tangata ‘akakitekite tuatua i runga i te pi‘a-tūtū? Ta‘anga‘anga‘ia te ‘akakitekite‘anga mei roto i te graph, i te ‘akakite mai i te tumu i ‘akatika ai koe, me kore ra, i pāto‘i ei koe, i tāna e karanaga nei.

This jar holds 20 glasses of water.

A glass holds 250 mL of water.



(e) How many **litres** of water does the jar hold?

_____ litres

A TV presenter claims the percentage of New Zealanders buying at op shops has trebled in the 20 years from 2002 to 2022.

Note: "Trebled" means three times as much.

(f) Is the TV presenter right?
Use information from the graph to say why you agree, or disagree, with their claim.

UIʻANGA TORU: Kaimoana (Te kai no roto i te tai)

Te ʻinangaro nei a Awa, i te koʻi pipi, e kai reka.

Ka rauka iā Awa, i te koʻi i tetaʻi 60 pipi, i roto i te ʻokotaʻi ora.

(a) Eaʻa i reira te roa, i roto i te **ora, e te miniti**, iā Awa, i te koʻiʻanga i tetaʻi 150 pipi?

_____ ora, e te _____ miniti

Ko Awa te mou nei i te pipi.

Teia te ʻakapapaʻanga no te tai-pi/tai-marō, no te Maʻanākai, ra 7 o ʻOkotopa, e te tuʻanga mua o te Tāpati, ra 8 o ʻOkotopa.

(b) Te ʻinangaro nei a Awa i te koʻi kaimoana i te tuātau **tai-marō**. Eaʻa i reira te taime tano, no Awa i te koʻi kaimoana, i te Tāpati, ra 8 o ʻOkotopa?

_____

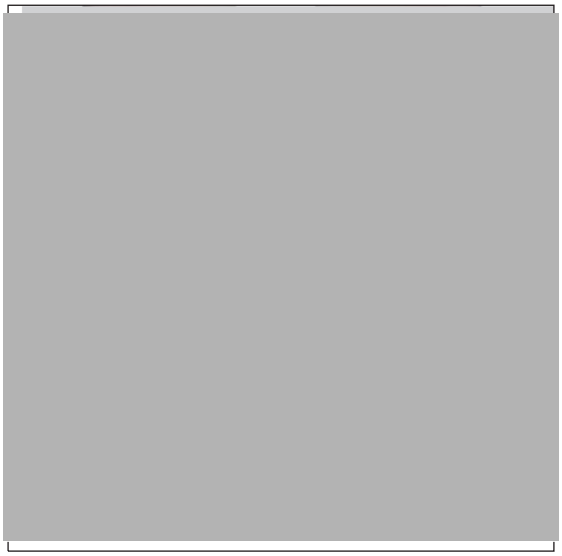
QUESTION THREE: Kaimoana (Seafood)

Awa wants to collect pipi, a tasty shellfish.

Awa can collect 60 pipi per hour.

(a) How long, in **hours and minutes**, will it take Awa to collect 150 pipi?

_____ hours, and _____ minutes



Awa holding pipi.

Here is a tide chart for Saturday 7 October and the first part of Sunday 8 October.

(b) Awa wants to collect seafood at **low tide**. About what time can Awa next collect seafood on Sunday 8 October?

_____

Te ʻinangaro nei a Awa i te tuku i tetaʻi ʻīnaki pāpaka, e te taʻangaʻanga i tetaʻi maunu.

Te tāmanako atu nei te koro (pāpā ruʻau) o Awa, i te taʻangaʻangaʻanga i tetaʻi kāʻiroʻanga ʻeke, e te moa, ei maunu ⅜.

(c) Mei te mea e, e 150 g ʻeke ta Awa, eʻia i reira grams moa, ta Awaka ka anoano?

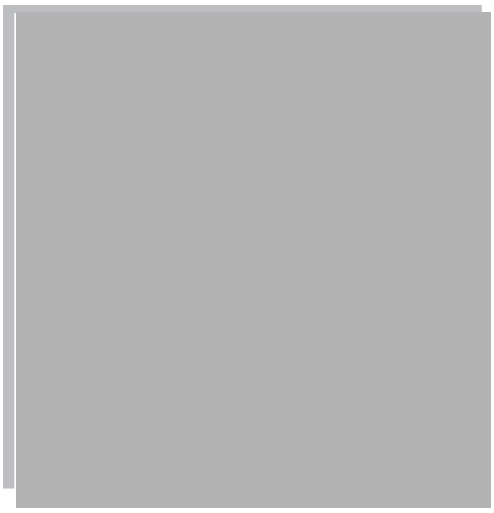
_____ g

Ka ʻakatikaʻia te ravakai i te rave i te snapper, mei tetaʻi roāngarere **meangiti rava atu** e 30 cm (vāitoʻia mei te V i roto i tōna ʻiku). Me tei raro ake i te 30 cm, kia ʻakaʻokiʻia i reiria, ki roto i te tai.

(d) Kua ʻakakakeʻia atu te roāngarere o teia snapper, ki te 30 cm. Ka tau rāi kia ʻapai a Awa i te snapper, me kore ra, kia ʻakaʻoki ki roto i te tai? ʻAkamārama mai i taʻau paʻuʻanga, na roto i te taʻangaʻangaʻanga i te au vāitoʻanga.

Awa wants to set a crab trap using bait.

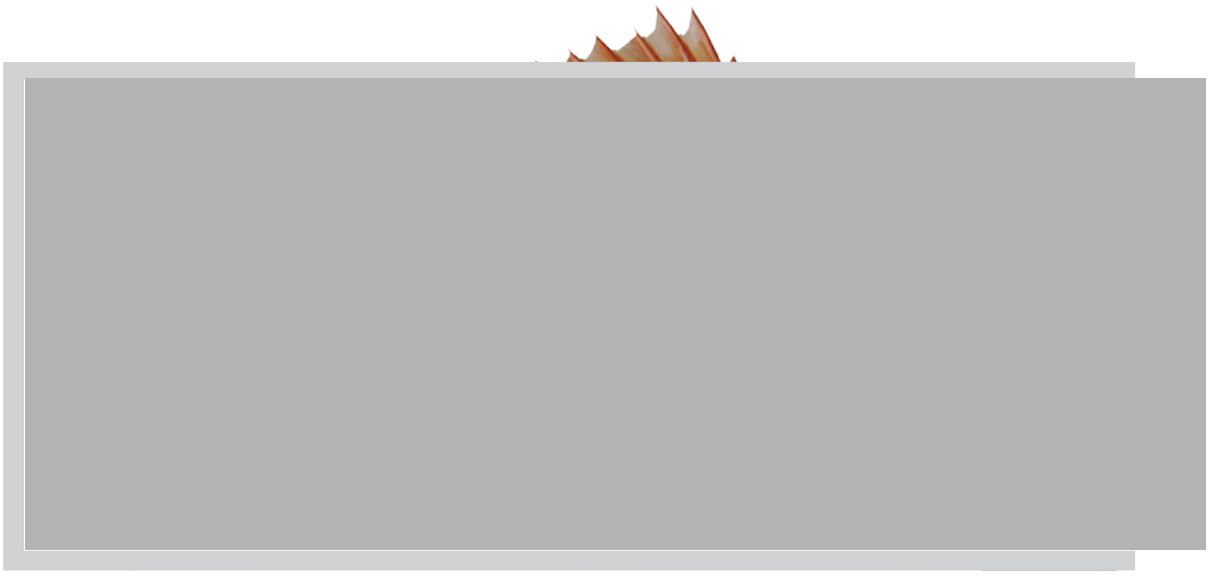
Awa's koro (grandfather) recommends using a bait mixture that is ⅜ squid and the rest is chicken.



(c) If Awa has 150 g of squid, how many grams of chicken does Awa need?

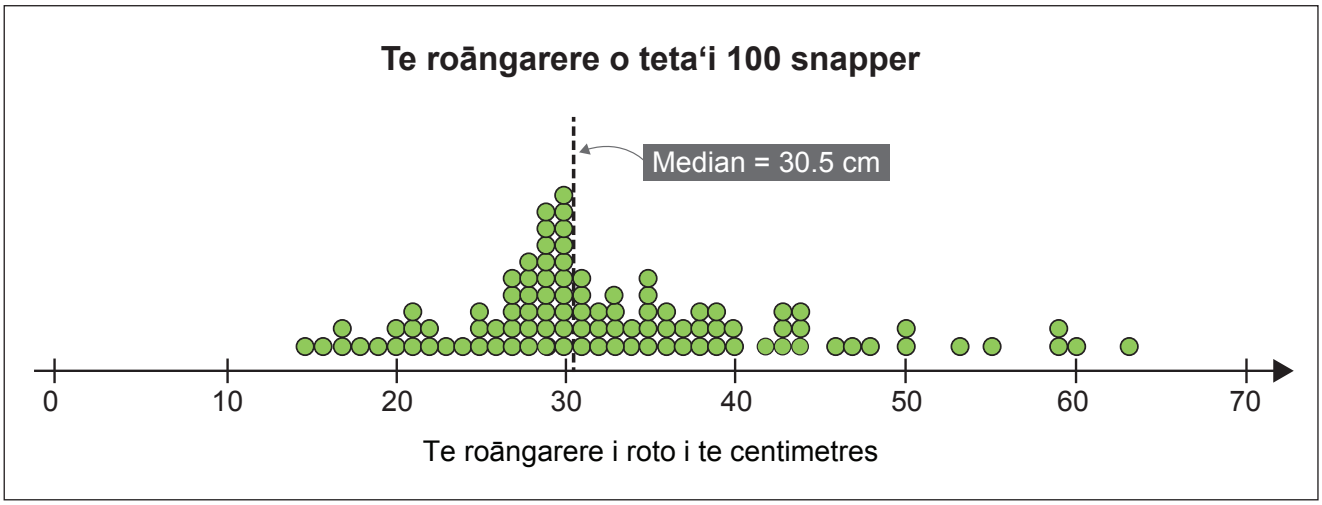
_____ g

People who catch fish can only keep a snapper if it has a **minimum** length of 30 cm (measured from the V in its tail). If it is shorter than 30 cm it must be put back into the sea.



(d) The length of this snapper rounds up to 30 cm. Should Awa keep the snapper or put it back into the sea? Explain your answer using measurements.

Te kite nei a Awa i teia graph, no runga i te roāngarere o teta‘i 100 snapper.



(e) Te mānakonako nei a Awa, no te ‘ī‘anga i teta‘i rima snapper i te ‘āngai i te kōpu tangata, ka anoano ‘aia i te ‘ī, e ta‘i nga‘uru snapper, ma te ‘aka‘oki atu i teta‘i rima, ki roto i te tai. Kua tano āinei ta Awa? Ta‘anga‘anga‘ia te au mānakonako‘anga, no runga i te ‘irinaki‘anga (probability) e te numero, mei roto mai i te graph, i te ‘akamārama i ta‘au pa‘u‘anga.

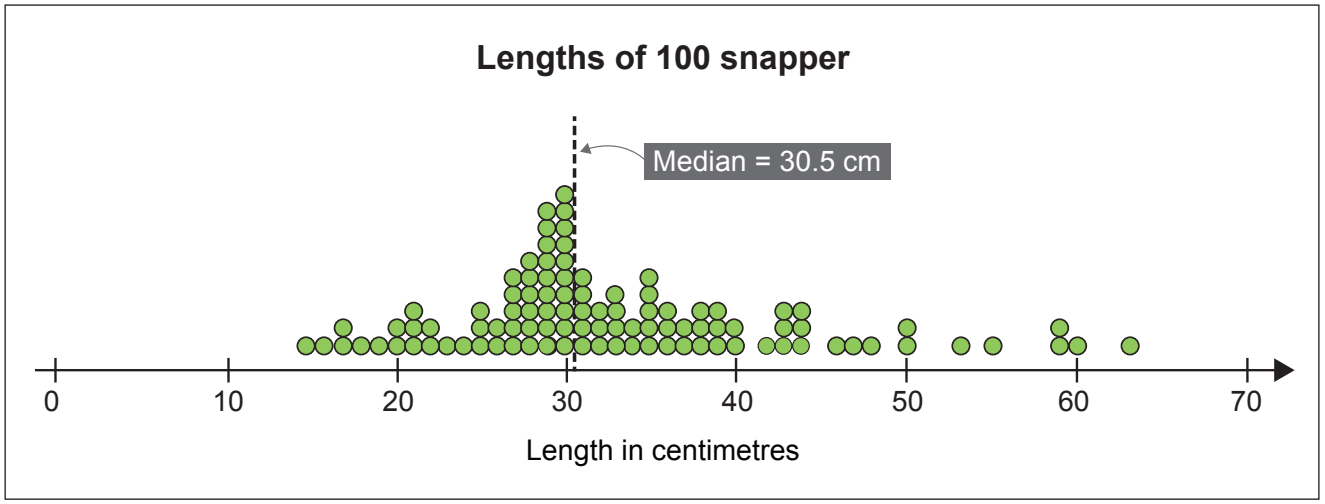
E poti meangiti, two-stroke to Awa. E kā‘iro‘ia ana te pēnitīni, e te ‘inu, na roto i te vāito‘anga 50:1 (mei te 2% ‘inu), no te matīni.

(f) Me e 10 rīta pēnitīni ta Awa, ea‘a i reira te ma‘ata o te ‘inu, i roto i te **millilitres,** te ka tau kia kā‘iro atu ‘aia?

_____ mL

Te poti o Awa, e tōna matīni two-stroke.

Awa sees this graph about the lengths of 100 snapper.



(e) Awa thinks that to catch five snapper to feed the whānau he will need to hook 10 snapper and put five of them back into the sea. Is Awa right? Use ideas about probability and numbers from the graph to explain your answer.

Awa has a boat with a small two-stroke motor. The fuel for the motor is petrol mixed with oil in a ratio of 50:1 (about 2% oil).

(f) If Awa has 10 litres of petrol, how much oil, in **millilitres,** should he add?

_____ mL

Awa's boat with a small two-stroke motor.

Uiʻanga ʻĀ: ʻĀpiʻipiʻiʻanga ʻakaʻoro

Te ʻāpiʻipiʻi nei a Deena i te ʻakaʻoro. E $80.00 te tutaki, no te ʻāpiʻipiʻiʻanga ʻakaʻoro, no te ʻokotaʻi ora.

Me ka ʻaere atu a Deena no tetaʻi ʻāpiʻipiʻiʻanga e rima, ka rauka te ʻokopātēʻanga e, 30%.

(a) Eaʻa i reira te tutaki no te ʻāpiʻipiʻiʻanga ʻakaʻoro, me ʻokopātēʻia?

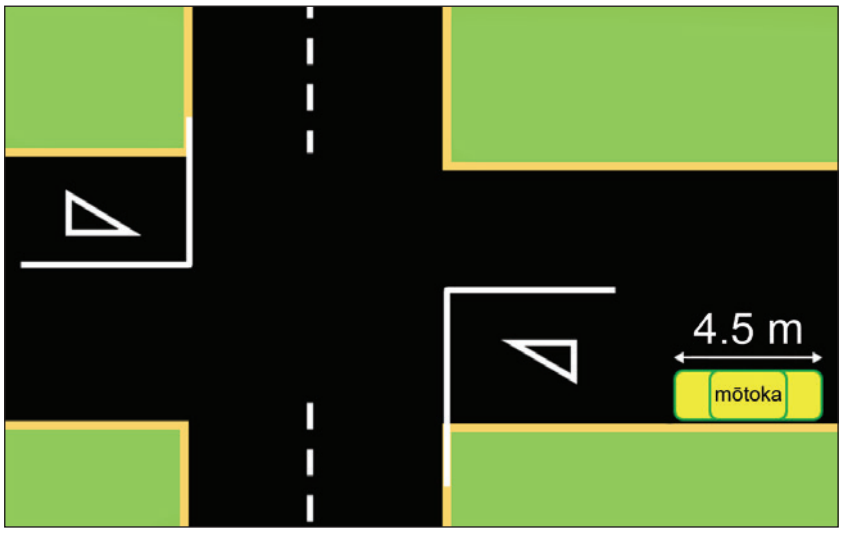
$ _____

Ko Deena te ʻāpiʻipʻi nei i te ʻakaʻoro.

Ka tau te pākaʻanga motoka i raro ake i te ture, me e **ono mita, me kore ra, e tere atu, te mamao** mei te poʻo.

Kua kite a Deena e, e 4.5 mita, te roāngarere o tōna mōtoka.

Kua pāka a Deena e **1½ o te roāngarere** mei te poʻo.



(b) Kua ʻapa āinei i raro ake i te ture, te pakaʻanga a Deena? ʻAkamārama mai i taʻau paʻuʻanga, na roto i te taʻangaʻangaʻanga i te au vāitoʻanga.

QUESTION FOUR: Driving lessons

Deena is learning to drive.
A one-hour driving lesson costs $80.

If Deena takes five lessons, there is a 30% discount.

(a) How much do five driving lessons cost, with the discount?

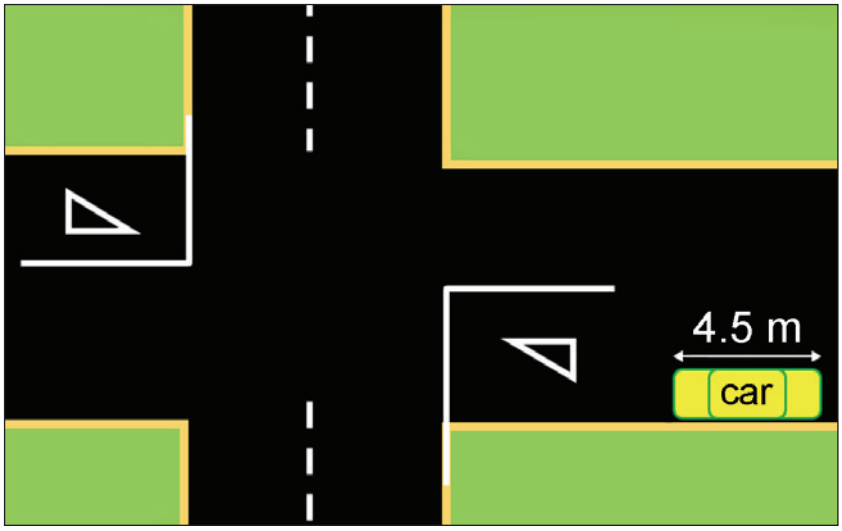
$ _____

Deena learning to drive.

A car is parked legally if it is **six metres or more** from the corner.

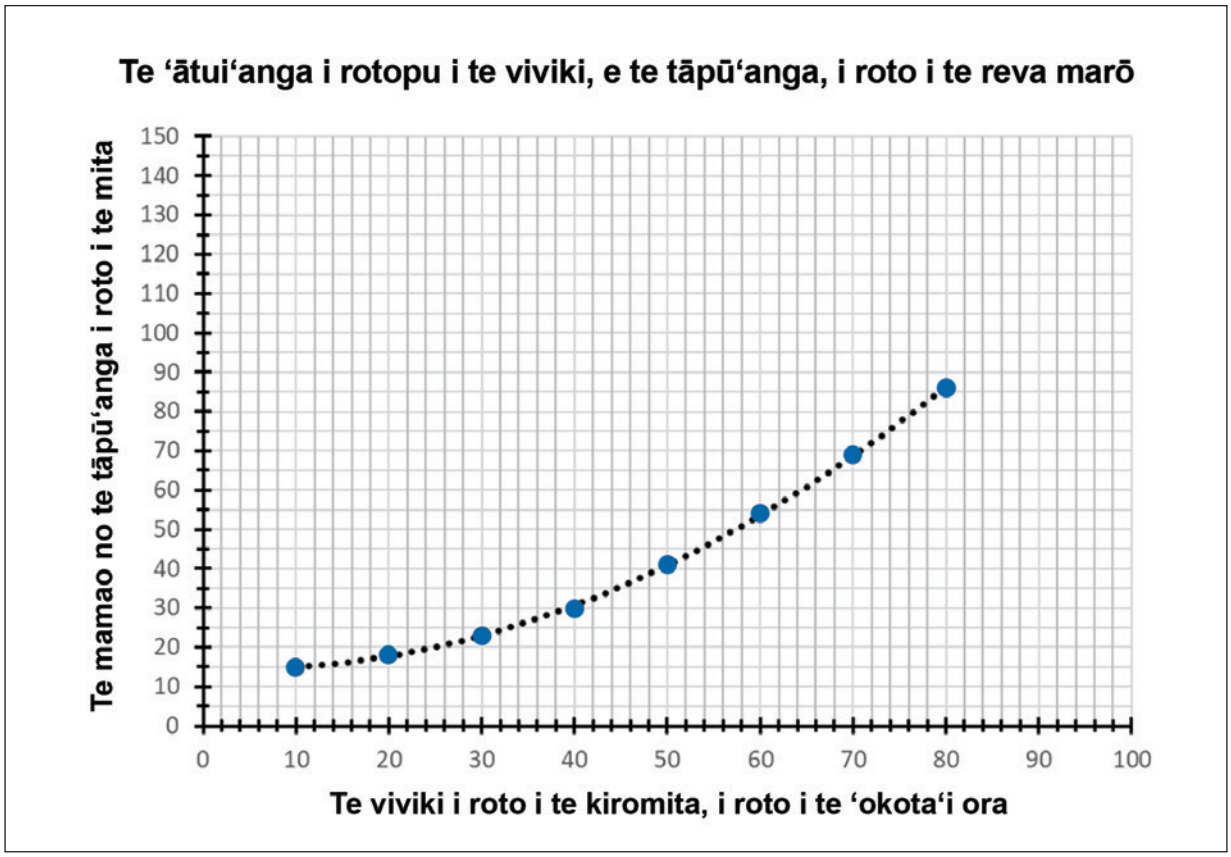
Deena knows her car is 4.5 metres long.

Deena parks **1½ car lengths** from the corner.



(b) Is Deena's car parked legally? Explain your answer using measurements.

Te ʻakaāri mai nei teia graph i te mamao te ka anoanoʻia te mōtoka kia tāpu, me taeria te au viviki tūkētūkē, i te tuātau reva marō.



E 100 kiromita i te ora, te viviki i te mōtoka o Deena, e tere nei.

(c) Eaʻa te mamao tau, me tāpū ʻaia i tōna mōtoka?

_____ m

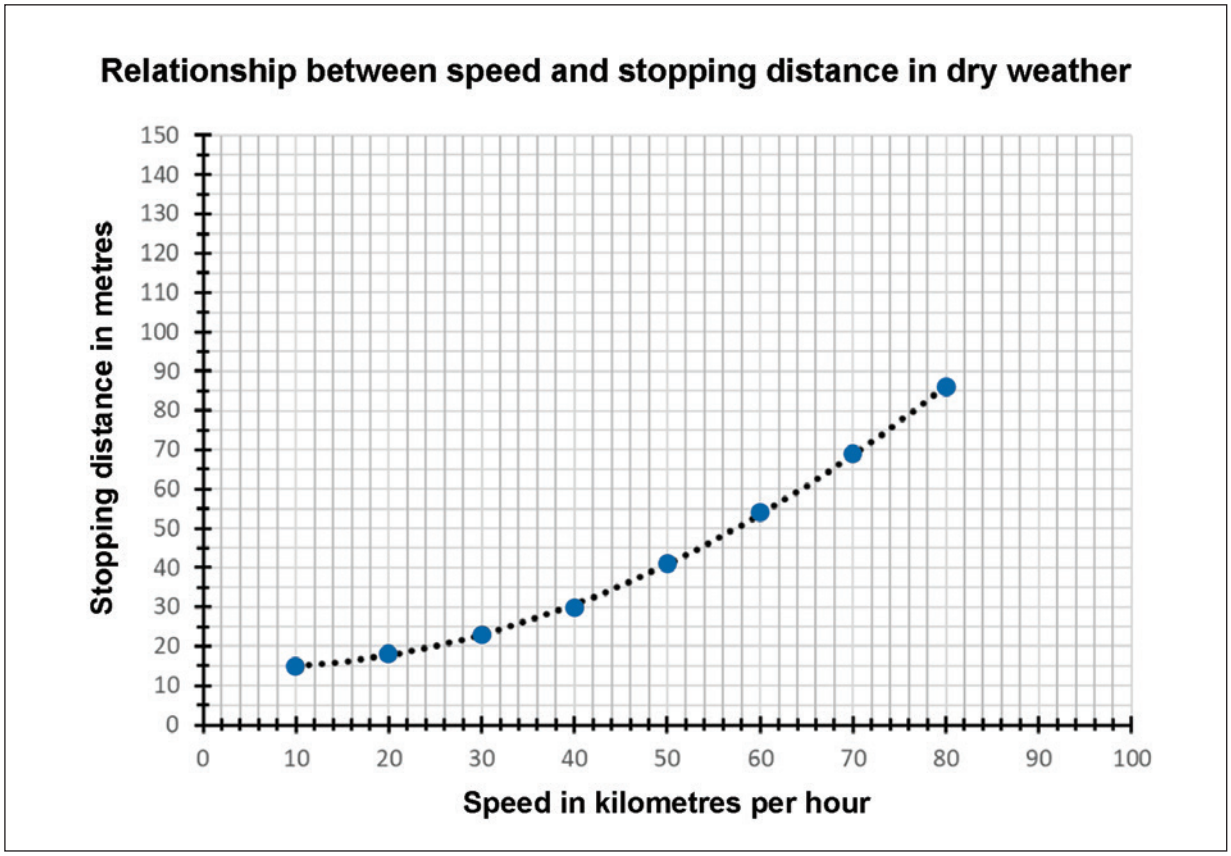
Me tāpū a Deena ki ko i te ngāʻi pikao pēnitīni, mei teia rāi te ʻākaraʻanga o te gauge, i runga i tōna mōtoka.

Kua kite a Deena e, e mou ana te tāngika pēnitīni i tetaʻi 48 rīta me ki.

(d) Eʻia i reira rīta pēnitīni, ka anoanoaʻia a Deena kia ʻoko, i te ʻakakī i te tāngika?

_____ rīta

This graph shows the distance that a car needs to stop at different speeds in dry weather.



Deena's car is moving at 100 kilometres per hour.

(c) About how much distance will her car take to stop?

_____ m

When Deena stops at the fuel station, the gauge on her car looks like this.

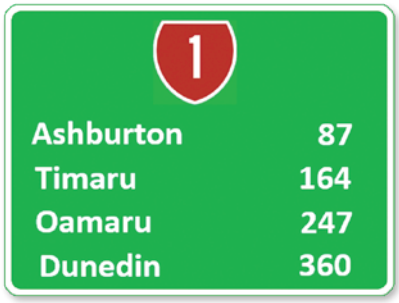
Deena knows that the fuel tank holds 48 litres when it is full.

(d) About how many litres of fuel does Deena need to buy to fill the tank?

_____ litres

Te ʻakaʻoro nei a Deena ki vaʻo ake ia ʻŌtautahi (Christchurch), iāia e teretere nei ki ʻŌtepoti (Dunedin).

Kua kite atu ʻaia i te ʻakairo mataʻara, i vaʻo ʻua ake ʻia ʻŌtautahi (Christchurch).

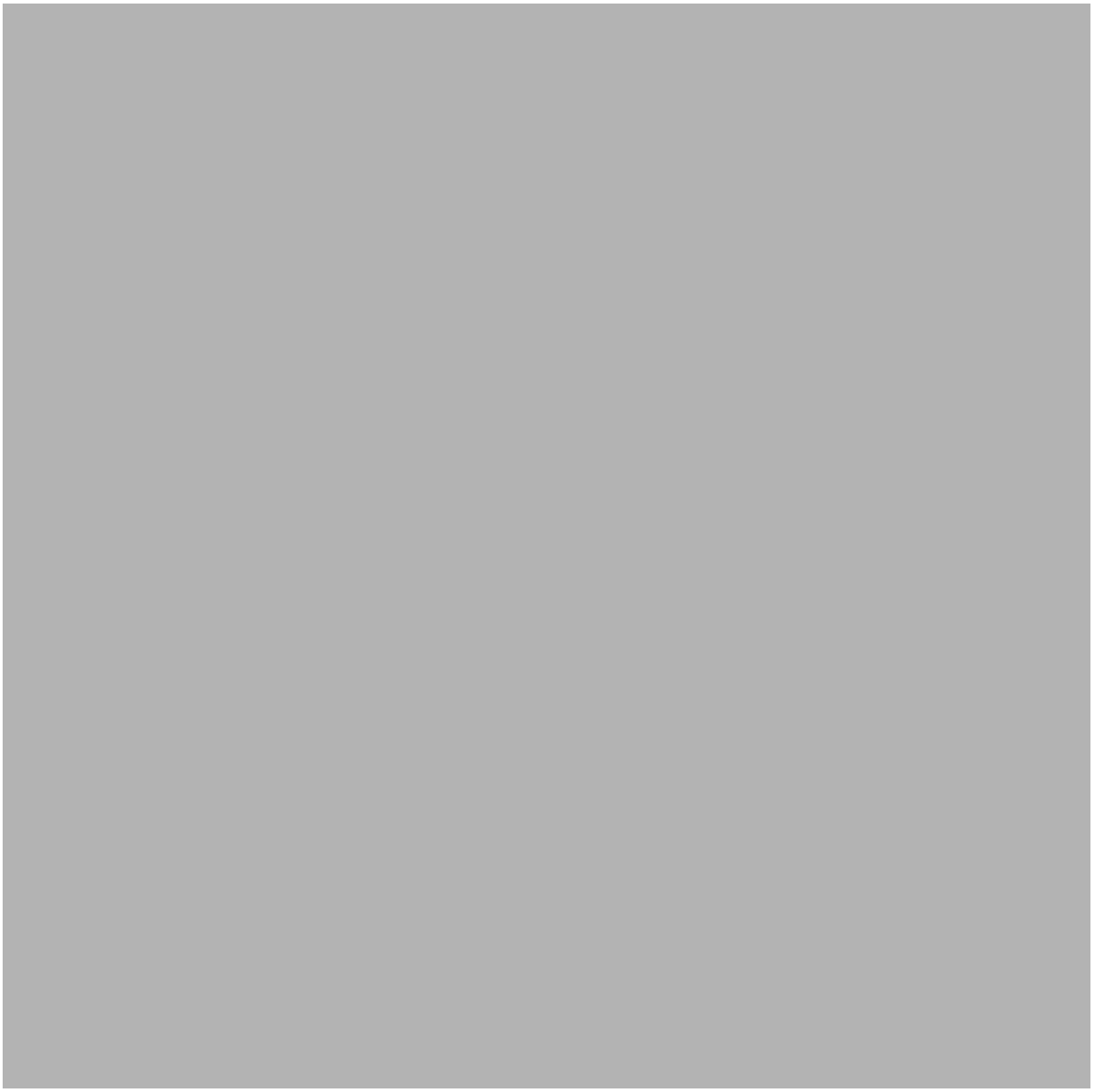


(e) Me tae atu a Deena ki Oamaru, mei te aʻa rāi te fraction o tōna teretereʻanga i oti?

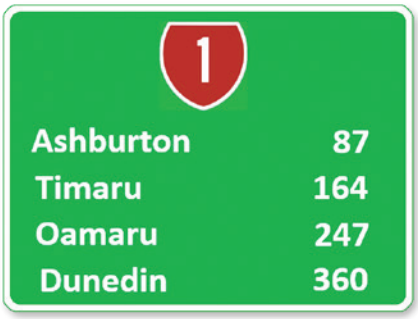
Pataʻia (✓) te fraction **vaitata rava atu** ki te paʻuʻanga tano.

(i) 5⁄10 ◯ (ii) 6⁄10 ◯ (iii) 7⁄10 ◯ (iv) 8⁄10 ◯ (v) 9⁄10 ◯

Deena drives out of Christchurch on her way to Dunedin.



She sees this road sign, just out of Christchurch.



(e) When Deena reaches Oamaru, about what fraction of her journey will she have completed?

Tick (✓) the fraction that is **closest** to the correct answer.

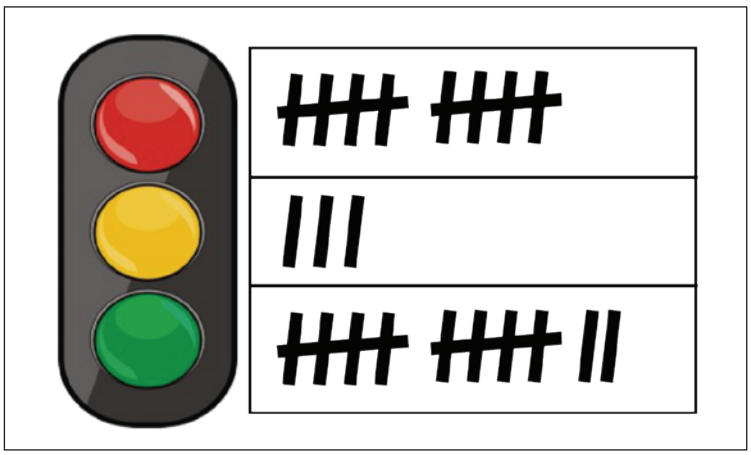
(i) 5/10 ◯ (ii) 6/10 ◯ (iii) 7/10 ◯ (iv) 8/10 ◯ (v) 9/10 ◯

E ʻakaʻoro ana a Deena na roto i taua traffic lights rāi, i taua taime rāi, i te au ra tātakitaʻi.

Te maʻani nei ʻaia i tetaʻi tally chart, i te ʻākara me e ʻakapapaʻanga tetaʻi, no te au kara o te au mōri.

Te ʻakaāri mai nei te māka, i te kara o te au mōri, i roto i te ʻokotaʻi ra.

Te karanga nei a Deena, "Me ʻoki ʻakaʻōu mai, ka matie paʻa te mōri."



Te tally chart a Deena.

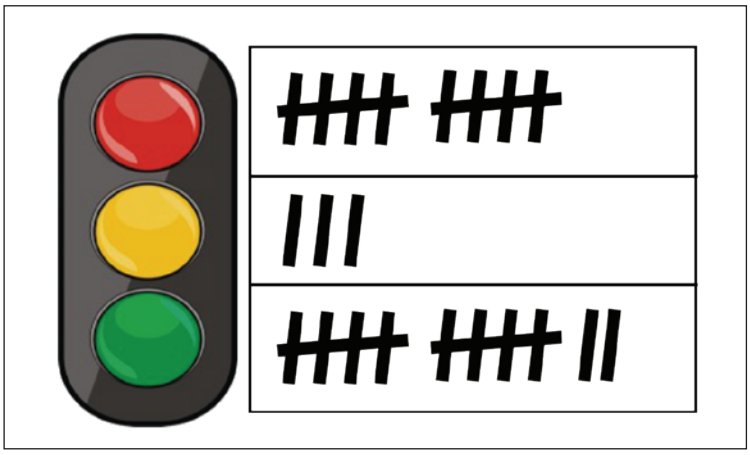
(f) Kua tano rāi tāna? ʻAkamārama mai i taʻau paʻuʻanga, na roto i te taʻangaʻangaʻanga i te au patene, mei roto i te tally chart a Deena.

Deena drives through the same set of traffic lights at the same time every day.

She makes a tally chart to see if there is a pattern to the colour of the lights.

Each mark shows the colour of the lights on one day.

Deena says, "The next time, the lights will probably be green."

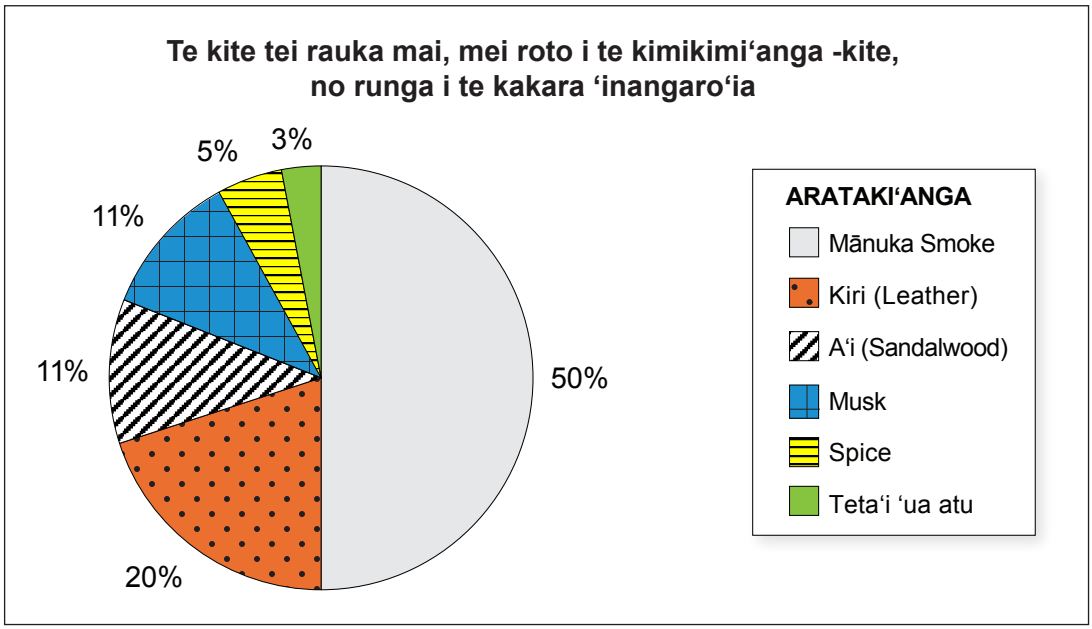


Deena's tally chart.

(f) Is she right? Explain your answer using percentages from Deena's tally chart.

UI‘ANGA RIMA: Te au kānara tākakara‘ia

Te ma‘ani kānara nei a Zion, ei ‘oko‘oko ki ko te ra mākete a te ‘āpi‘i. Kua tuku atu ‘aia i teta‘i kimikimi‘anga kite, ki va‘o, i te kimi i te kakara ‘inangaro‘ia e te tangata. Teia tei kitea mai.



(a) Ea‘a te nga kakara tei tere atu i te two thirds o te au ‘iki‘anga?

_____ e _____

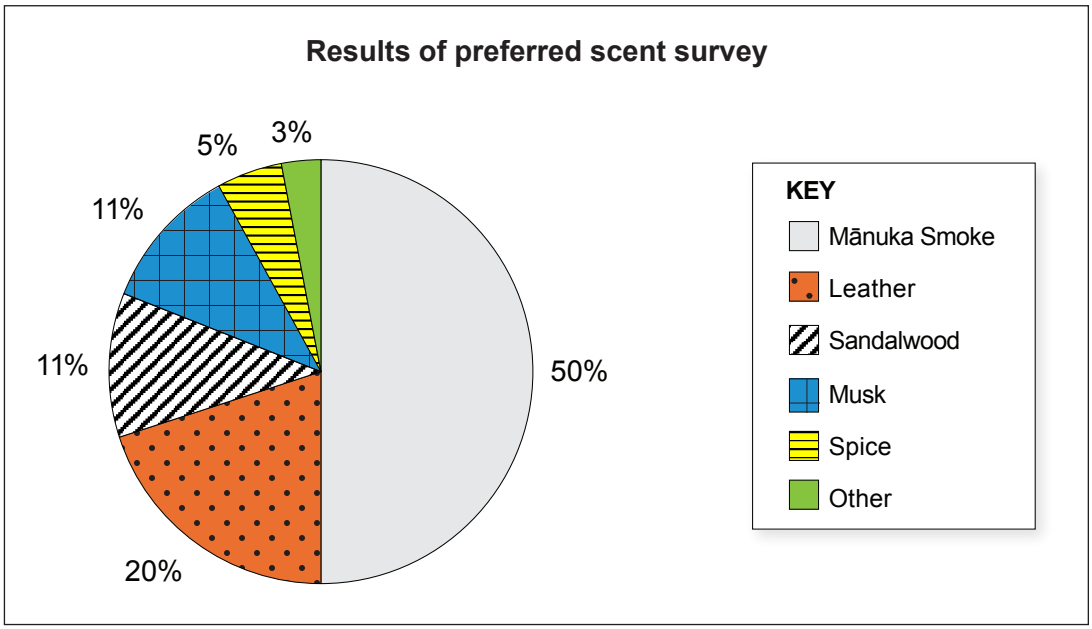
E ma‘ani ana a Zion i te au kānara, na roto i te ta‘anga‘anga‘anga i teia tārē‘anga (ratio) e rima kānara Mānuka Smoke, ki te rua kānara Leather (5:2).

(b) E ma‘ani ana a Zion e 84 kānara, na roto i te ta‘anga‘anga‘anga i te tārē‘anga (ratio) 5:2. E‘ia i reira, āna kānara Mānuka Smoke i ma‘ani?

_____ te au kānara Mānuka Smoke

QUESTION FIVE: Scented candles

Zion makes candles to sell at a school's market day. He sent out a survey to find out which scents people prefer. Here are the results.



(a) Which two scents make up over two thirds of the choices?

_____ and _____

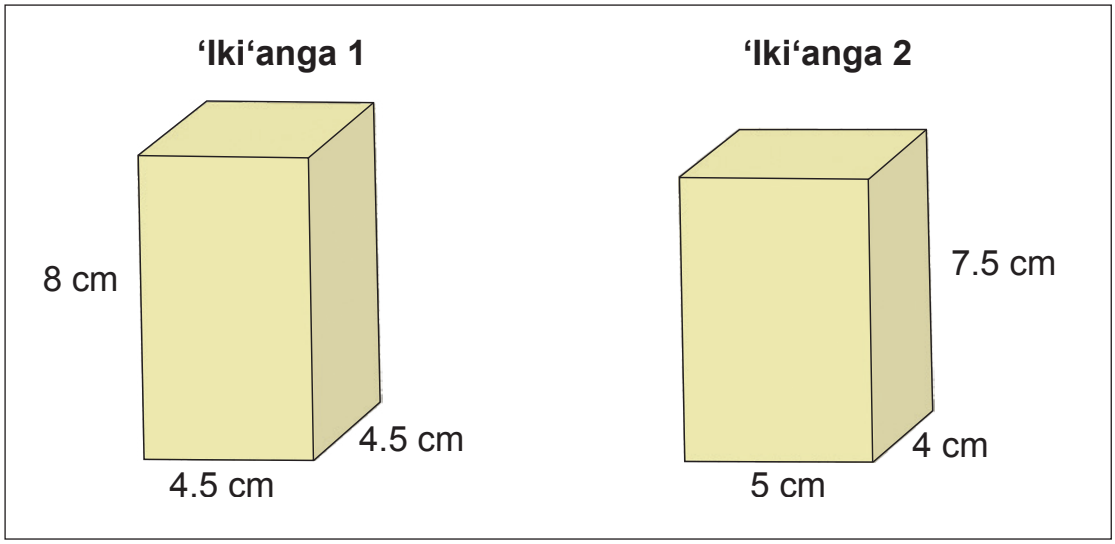
Zion makes candles using this ratio: five Mānuka Smoke candles to every two Leather candles (5:2).

(b) Zion makes 84 candles using the 5:2 ratio. How many Mānuka Smoke candles does he make?

_____ Mānuka Smoke candles

E maʻani katoa ana a Zion i te au kānara, mei te rectangular prisms rāi.

Kia māmā mai te tutaki, kāre te kānara e mamaʻata roa.



Te karanga nei a Zion e, e150 cm^3 te volume no nga ʻikiʻanga e rua me kore ra, ki raro mai.

(c) Kua tano rāi ta Zion? ʻAkamārama mai i taʻau paʻuʻanga na roto i te taʻangaʻangaʻanga i te au vāito mei roto i **nga** ʻikiʻanga i runga ake nei.

Te ʻakaāri mai nei teia ʻakapapaʻanga i te tutaki i te au ʻapinga. Te katoaʻanga o te tutaki no tetaʻi 84 kānara.

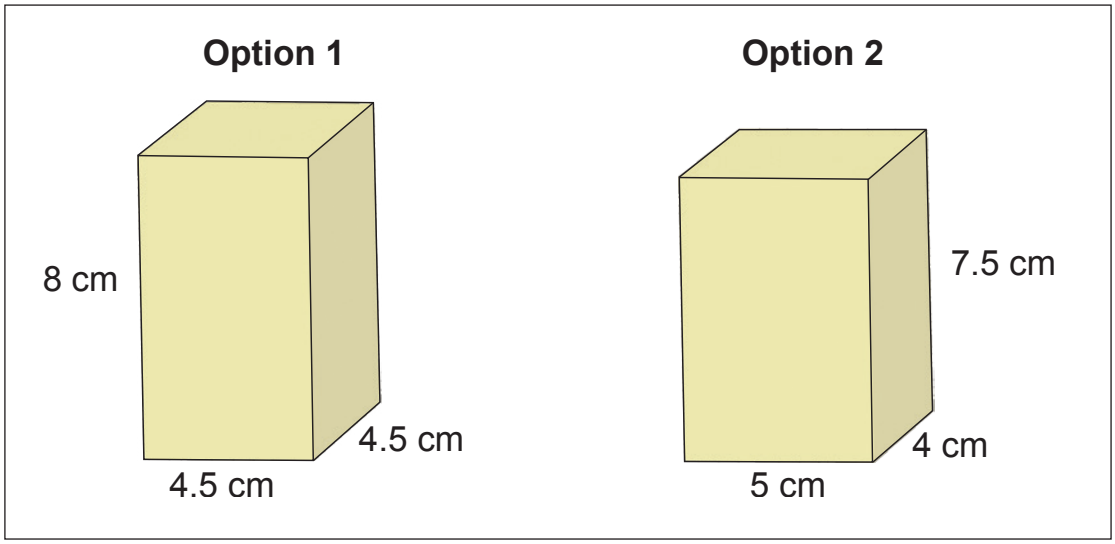
Te ʻapinga	Te katoaʻanga i te tutaki, no tetaʻi 84 kānara
Kānara (13 kg)	$182.00
Uīki kānara	$40.50
Te au kakara no te kānara	$33.70
Tākū kānara	$21.00

(d) Eʻia moni no te maʻaniʻanga i te kānara **ʻokotaʻi**?

$ _____

Zion also makes candles that are the shape of rectangular prisms.

To keep costs down, the candles cannot be too big.



Zion says that both options have a volume of 150 cm^3 or less.

(c) Is Zion right? Explain your answer using measurements from **both** options above.

This table shows the cost of supplies. The total cost is for 84 candles.

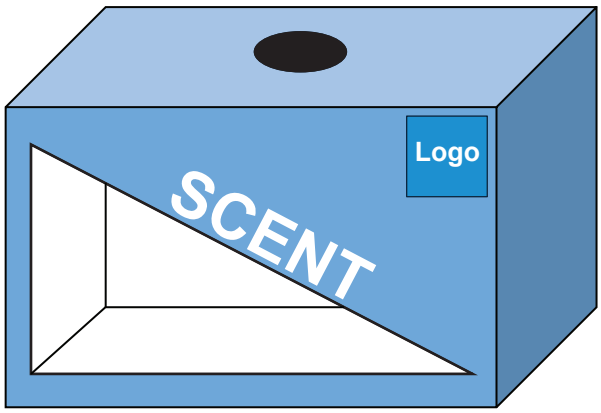
Item	Total cost for 84 candles
Candle wax (13 kg)	$182.00
Candle wicks	$40.50
Candle scents	$33.70
Candle dyes	$21.00

(d) How much does it cost to make **one** candle?

$ _____

Te anoano nei a Zion, i te ma‘ani i teta‘i pi‘a, ei mou i te kānara ‘okota‘i.

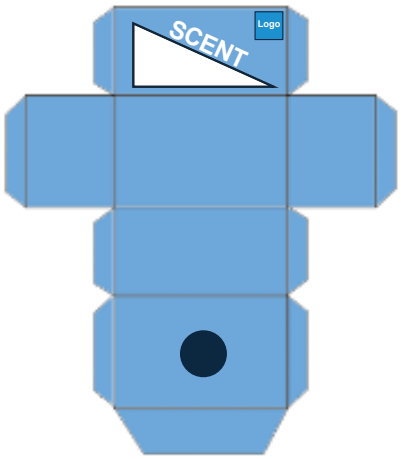
Mei teia rāi te ‘ākara‘anga o te pi‘a:



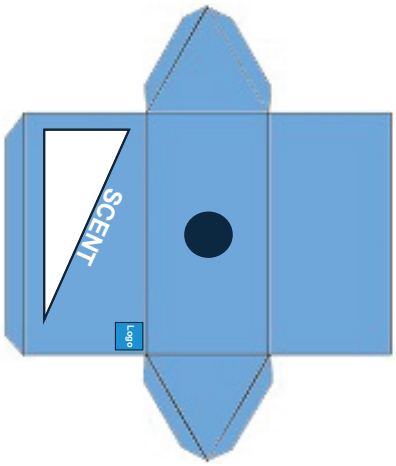
(e) Ko te‘ea pi‘a tei ‘āiteite ki te pi‘a tei ‘akaāri‘ia mai, i runga ake nei?

Pata‘ia (✓) te pa‘u‘anga tano.

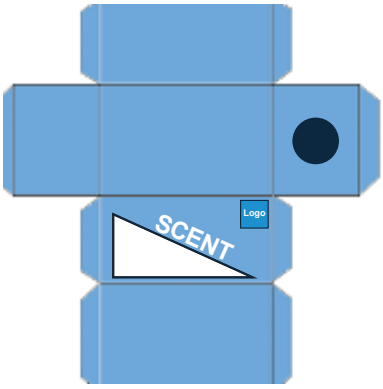
(i) ○



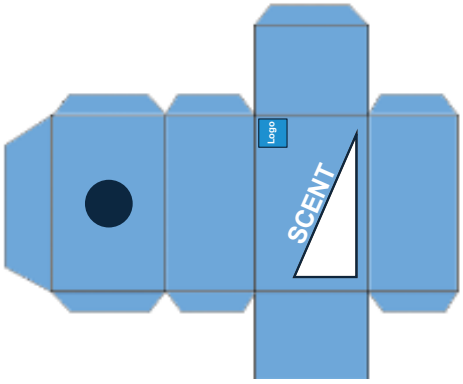
(ii) ○



(iii) ○

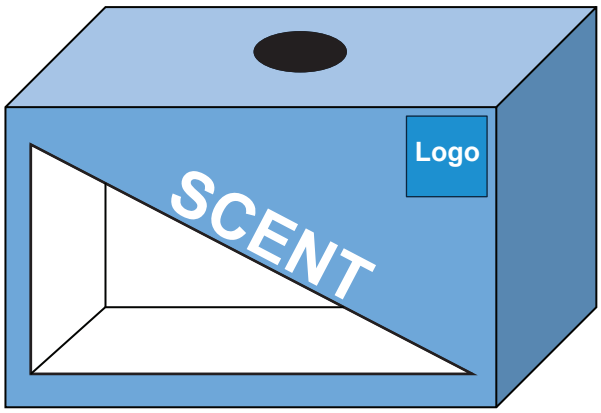


(iv) ○



Zion needs to make a box to hold one candle.

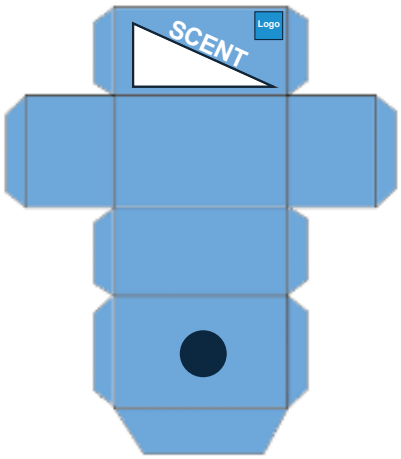
The box will look like this:



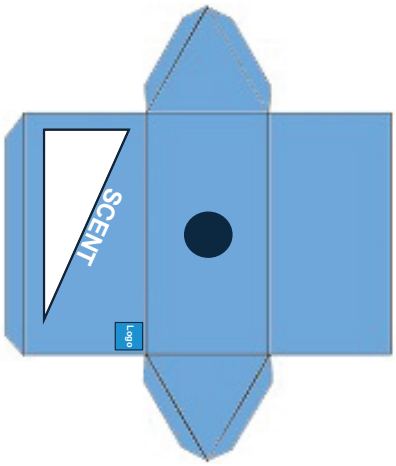
(e) Which net matches the box shown above?

Tick (✓) the correct answer.

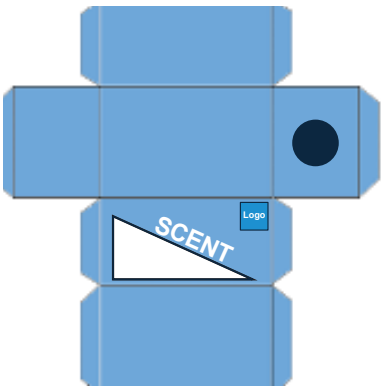
(i) ◯



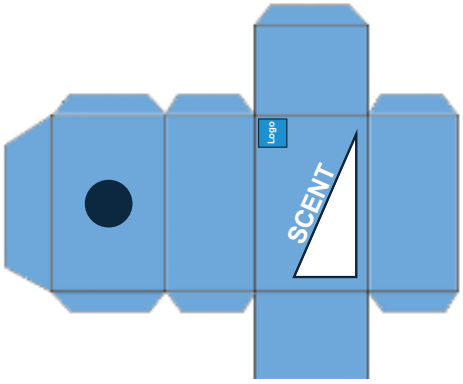
(ii) ◯



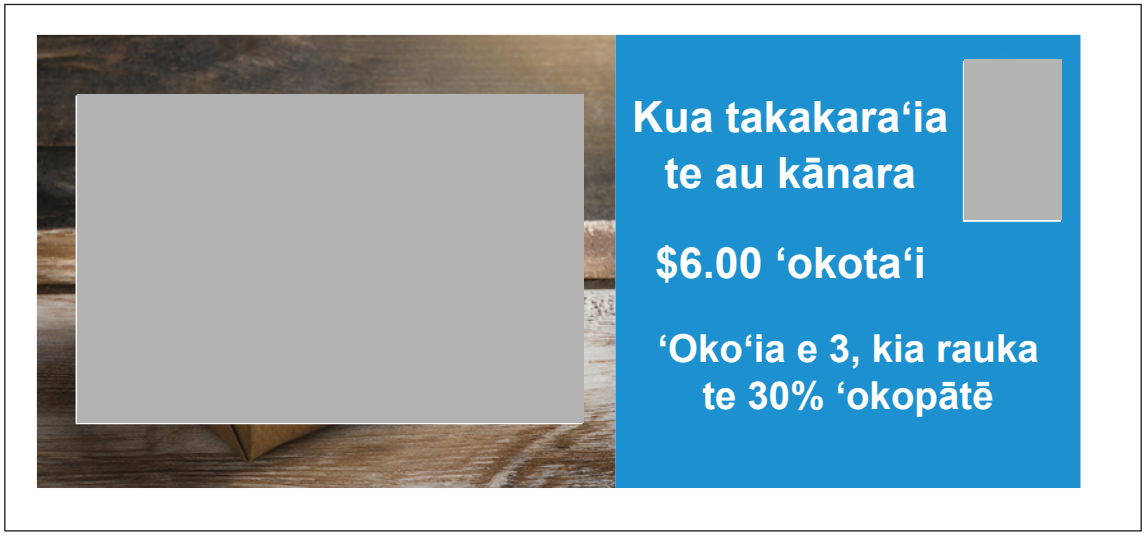
(iii) ◯



(iv) ◯



Ko te ra ʻoko pātē teia i te Kānara Takakaraʻia, i ko i te Market Day.



Te ʻinangaro nei a Jules i te ʻoko e rua kānara, ei ʻapinga aroʻa nāna, no tōna metua-tāne, e tōna pāpā ruʻau.

(f) Ka ʻoko āinei a Jules, e toru kānara e 30% tei kiritiʻia no te ʻokopāte, me kore ra, e rua kānara, e $6.00 i te mea ʻokotaʻi?

ʻAkamārama mai i taʻau paʻuʻanga, na roto i te taʻangaʻangaʻanga i taʻau kimikimiʻanga.

This is the Market Day special deal for Scented Candles.

Jules wants to buy two candles as gifts for her father and grandfather.

(f) Should Jules buy three candles with 30% off, or two candles for $6 each?

Explain your answer using calculations.

Teta‘i atu ngā‘i ātea, me ka ‘inangaro‘ia.
Tātā‘ia te numero (au numero) o te ui‘anga me ka tau.

TE NUMERO O TE UI'ANGA	

Extra space if required.
Write the question number(s) if applicable.

QUESTION NUMBER	

Teta‘i atu ngā‘i ātea, me ka ‘inangaro‘ia.
Tātā‘ia te numero (au numero) o te ui‘anga me ka tau.

TE NUMERO O TE UI'ANGA	

Extra space if required.
Write the question number(s) if applicable.

QUESTION NUMBER	

Au ʻakameitakiʻanga

Kua ʻakatanotanoʻia te au ʻapinga no roto mai i te au turanga e āru mai nei, no teia vāitoʻanga:

Uiʻanga Taʻi

Earth, https://stock.adobe.com/images/planet-earth-or-world-globe-with-oceans-and-water-flat-vector-color-icon-for-apps-and-websites/170537095
Fish, https://as2.ftcdn.net/v2/jpg/02/78/07/69/1000_F_278076962_aGpb3OGG2ONzsRczAWb3pOCFtIPOXySx.jpg
Lizard, https://stock.adobe.com/nz/images/side-view-of-western-green-lizard-aka-lacerta-bilineata-isolated-on-white-background/558141610
Dinosaur, https://as2.ftcdn.net/v2/jpg/02/96/43/13/1000_F_296431397_azSr3joO9Dnywn8v5IBHQY29nOFkJHqj.jpg
Mammal, https://commons.wikimedia.org/wiki/Category:Paleocene
Human, https://t4.ftcdn.net/jpg/07/48/96/47/240_F_748964785_HSRxCdwfaiJNY0gVm5o6dS3qXWTCCNrm.jpg
Swimming turtle, https://andyoucreations.com/blog/how-fast-do-pacific-green-sea-turtles-swim/
Baby turtles, https://asiangeo.com/articles/turtle-nesting-season-in-singapore-how-can-we-help/
Rotating turtle, https://stock.adobe.com/nz/images/turtle-marine-animal-vector-sea-turtle-silhouette-clipart/670532819
Measuring a turtle's shell, https://www.lls.nsw.gov.au/__data/assets/image/0007/1377070/Measuring-the-underside-of-a-juvenile-Eastern-long-neck-turtle.-Photo-Dan-Hutton_1.jpg

Uiʻanga Rua

Price label, https://stock.adobe.com/images/set-or-collection-brown-natural-craft-kraft-paper-hang-tags-price-tags-or-gift-tags-with-striped-bakers-twine-isolated-design-elements-different-positions-png-file/693906873
Plate, https://www.replacements.com/china-crown-lynn-polynesia/c/254524
Large jar with tap, https://www.ikea.com/ie/en/p/vardagen-jar-with-tap-80452639/

Uiʻanga Toru

Pipi, https://www.poulosbros.com.au/pippies-fresh-goolwa-1kg
Crab pot, https://www.completeangler.co.nz/tackleman-heavy-duty-collapsible-crab-pot-55cm-11347
Snapper fish, https://www.mpi.govt.nz/fishing-aquaculture/recreational-fishing/information-on-popular-fish-in-nz/snapper-status-and-information/
Ruler, https://stock.adobe.com/images/school-metal-ruler-isolated-on-white-background-metric-steel-ruler-isolated-on-white-30cm/678798856
Outboard motor, https://thumbs.dreamstime.com/z/man-starting-outboard-engine-plastic-boat-exhaust-smoke-motor-haugesund-norway-januray-yamaha-108589991.jpg

Uiʻanga ʻĀ

Driving, https://www.aa.co.nz/drivers/driver-licences/learner-driver-licences/
Fuel gauge, https://www.amazon.ca/Backlight-Adjustable-10-180ohm-240-30ohm%EF%BC%8CFuel-Motorcycle/dp/B09PG8519L
Map, https://www.google.com/maps/dir/Dunedin/Christchurch/
Car icon, https://stock.adobe.com/search?k=car+icon+front&asset_id=501416924

Uiʻanga Rima

Candles, https://stock.adobe.com/images/candles-kit-design-realistic-wax-base-of-different-shapes-and-flames-burning-lights-vector-set-illustration-fire-candle-candlelight-realistic/383008655
Wrapped package, Adobe stock – AI-generated

Acknowledgements

Material from the following sources has been adapted for use in this assessment:

Question One

Earth, https://stock.adobe.com/images/planet-earth-or-world-globe-with-oceans-and-water-flat-vector-color-icon-for-apps-and-websites/170537095
Fish, https://as2.ftcdn.net/v2/jpg/02/78/07/69/1000_F_278076962_aGpb3OGG2ONzsRczAWb3pOCFtIPOXySx.jpg
Lizard, https://stock.adobe.com/nz/images/side-view-of-western-green-lizard-aka-lacerta-bilineata-isolated-on-white-background/558141610
Dinosaur, https://as2.ftcdn.net/v2/jpg/02/96/43/13/1000_F_296431397_azSr3joO9Dnywn8v5IBHQY29nOFkJHqj.jpg
Mammal, https://commons.wikimedia.org/wiki/Category:Paleocene
Human, https://t4.ftcdn.net/jpg/07/48/96/47/240_F_748964785_HSRxCdwfaiJNY0gVm5o6dS3qXWTCCNrm.jpg
Swimming turtle, https://andyoucreations.com/blog/how-fast-do-pacific-green-sea-turtles-swim/
Baby turtles, https://asiangeo.com/articles/turtle-nesting-season-in-singapore-how-can-we-help/
Rotating turtle, https://stock.adobe.com/nz/images/turtle-marine-animal-vector-sea-turtle-silhouette-clipart/670532819
Measuring a turtle's shell, https://www.lls.nsw.gov.au/__data/assets/image/0007/1377070/Measuring-the-underside-of-a-juvenile-Eastern-long-neck-turtle.-Photo-Dan-Hutton_1.jpg

Question Two

Price label, https://stock.adobe.com/images/set-or-collection-brown-natural-craft-kraft-paper-hang-tags-price-tags-or-gift-tags-with-striped-bakers-twine-isolated-design-elements-different-positions-png-file/693906873
Plate, https://www.replacements.com/china-crown-lynn-polynesia/c/254524
Large jar with tap, https://www.ikea.com/ie/en/p/vardagen-jar-with-tap-80452639/

Question Three

Pipi, https://www.poulosbros.com.au/pippies-fresh-goolwa-1kg
Crab pot, https://www.completeangler.co.nz/tackleman-heavy-duty-collapsible-crab-pot-55cm-11347
Snapper fish, https://www.mpi.govt.nz/fishing-aquaculture/recreational-fishing/information-on-popular-fish-in-nz/snapper-status-and-information/
Ruler, https://stock.adobe.com/images/school-metal-ruler-isolated-on-white-background-metric-steel-ruler-isolated-on-white-30cm/678798856
Outboard motor, https://thumbs.dreamstime.com/z/man-starting-outboard-engine-plastic-boat-exhaust-smoke-motor-haugesund-norway-januray-yamaha-108589991.jpg

Question Four

Driving, https://www.aa.co.nz/drivers/driver-licences/learner-driver-licences/
Fuel gauge, https://www.amazon.ca/Backlight-Adjustable-10-180ohm-240-30ohm%EF%BC%8CFuel-Motorcycle/dp/B09PG8519L
Map, https://www.google.com/maps/dir/Dunedin/Christchurch/
Car icon, https://stock.adobe.com/search?k=car+icon+front&asset_id=501416924

Question Five

Candles, https://stock.adobe.com/images/candles-kit-design-realistic-wax-base-of-different-shapes-and-flames-burning-lights-vector-set-illustration-fire-candle-candlelight-realistic/383008655
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English translation of the wording on the front cover

Numeracy 2024

32406C Apply mathematics and statistics in a range of everyday situations

Credits: Ten

32406C

OUTCOMES	
1	Formulate mathematical and statistical approaches to solving problems in a range of everyday situations.
2	Use mathematics and statistics to meet the numeracy demands of a range of everyday situations.
3	Explain mathematical and statistical responses to situations.

Enter your National Student Number (NSN) and School Code into the space above.

You should attempt ALL the questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–43 in the correct order and that none of these pages is blank.

Do not write in the margins (▨). This area will be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

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