HE TAUAROMAHI

1

Te Kaupae 1 Te Pāngarau 2025

92067 Te whakamahi tikanga taurangi hei whakaoti rapanga

Ngā whiwhinga: E 5

92068 Te whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga

Ngā Whiwhinga: E 5

HE TAUAROMAHI

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NZQA
Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Tā te ākonga mahi (Kairangi/Excellence)

RANGAHAU HAUTAPU

Te Pūāhua
Ko tā mātou mahi, he whakarite i te umu kohukohu whetū mō te hautapu o te kura whānui o Te Kura Kaupapa Māori o Ngā Mokopuna (14/07/25).

He aha tēnei mea te hautapu?
I te marama o Hōtoke, ka rewa ngā whetū o Matariki. Ka kitea tuatahitia ki ngā paerangi o te rāwhiti. Nā, ka tīmata te mahi hautapu. Ko te ingoa katoa o tēnei mahi ko, "te whāngai i te hautapu" heoi ka whakarāpopotongia te tokomaha hei "hautapu" noa. Ko te tikanga o tēnei mea te hautapu, he taki i ngā kawa tapu hei whāngai ngā whetū.

E TORU NGĀ WĀHAHNGA MATUA O TE WHĀNGAI I TE HAUTAPU

TE TIROHANGA
I te rewanga a Matariki, ka kimi i a Matariki i te poho o Ranginui. Ka āta mātaki ngā tohunga i ngā kāhui whetū. I taua wā, ka tirotiro rātou ki ngā āhuatanga katoa o ngā whetū. Hei tauira, te kaha o te pīataata, te āhuahanga, te tae me te tawhiti o tētahi whetū ki tētahi anō. Ka tohua mēnā he maha ngā kai, mēnā rānei ka hē te āhuatanga o te tupu kai. Ka mutu, ko ēnei āhuatanga katoa ka mau ki te hirikapo o te tangata. Nā ēnei mātauranga, kua tika tā te tohunga whakapae mō te tau e kainamu ana.

TE TAKI MŌTEATEA
Ko te wāhanga tuarua ko te takinga o ngā kawa tapu. I te nuinga o te wā, ko ngā tohunga tērā e whakahaere ana, otirā e taki ana i ngā karakia o te hautapu. Heoi, i tēnei horopaki, ko mātou ngā ākonga wharekura e taki ana i ngā karakia me ngā karanga.
He 10 ngā karakia, he tikanga hoki ki tā ia karakia.

Waere (kia haumaru ai te taki o te toenga o ngā karakia)
- Pōhutukawa
- Tipuānuku
- Tipuārangi
- Waitī
- Waitā
- Waipunarangi
- Ururangi
- Hiwa-i-te-rangi
- Matariki

Ko tētahi take o ēnei karakia, he tangi atu ki ngā mate kua whenumi ki te pō i te tau kua hipa. Ko te wā kia hoki ngā mahara ki ngā mate kua herea ki te waka o Taramainuku, arā, ki a Pōhutukawa.

TE WHĀNGAI I NGĀ WHETŪ
Ko ngā whetū e hāngai ana ki ngā momo kai ko Tipuānuku, Tipuārangi, Waitī, rātou ko Waitā. Ko te mahi a te rōpu whakahaere i te hautapu, he tiki ake i ngā kai e hāngai ana ki ia o ērā whetū.

- Tipuānuku - Kumara
- Tipuārangi - Heihei
- Waitī - Tuna
- Waitā - Karengo

Whai muri i te tiki ake i ngā kai, ka tunua ki te rua hāngi, arā, ka hīkina te taupoki i runga i te kōhua, ka rewa te auahi ki runga, koia tā tātou whāngai i ngā whetū. He wā kia tuku kia whakahau i a rātou. Koinei te te umu kohukohu whetū, ko te ahurewa me te whāngai i te Hautapu.

Ngā Pātai Tūhura

1. *He aha te whāroa me te putu o te rākau kua taka ki roto i te rua?*

Matapae: **ki tāku e matapae nei, ka 2.2 mita te roa o te rākau, ā, ka 15 te putu o tōna koki.**

2. *He aha te tawhiti mai te hunga kaikarakia ki te kura?*

Matape: ki tāku e matapae nei, ka 195 mita te tawhiti mai te hunga kaikarakia ki te kura.

3. "Ka hia hāora kia piki ake ko te paemahana o ngā kohatu i te rua hāngī ki te 515℃?"

Matapae: ki tāku e matapae nei, ka 2.5 hāora kia tae te paemahana ki te 515℃.

4. *Ka hia te nui o te rua hāngi kia whāngai i te 100 tāngata?*

Matapae: ki tāku e matapae nei, ka 0.6m^3 te nui o te rua hāngi mō te kai.

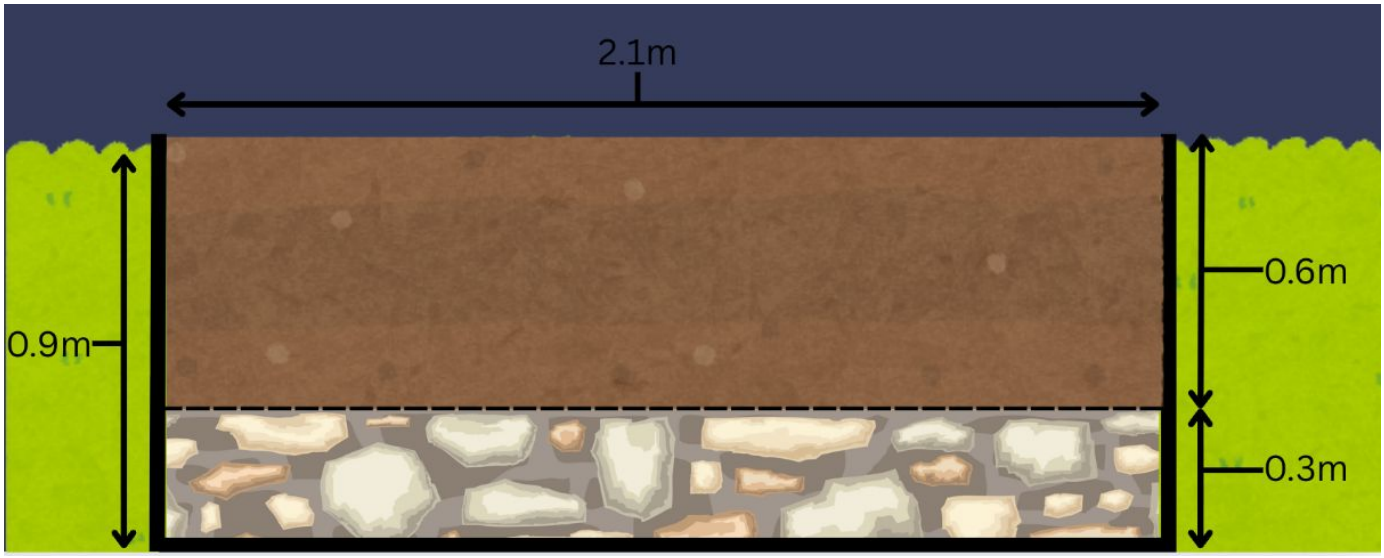
5. *He aha te wā e tika ana kia rau atu i ngā kōhatu ki te rua?*

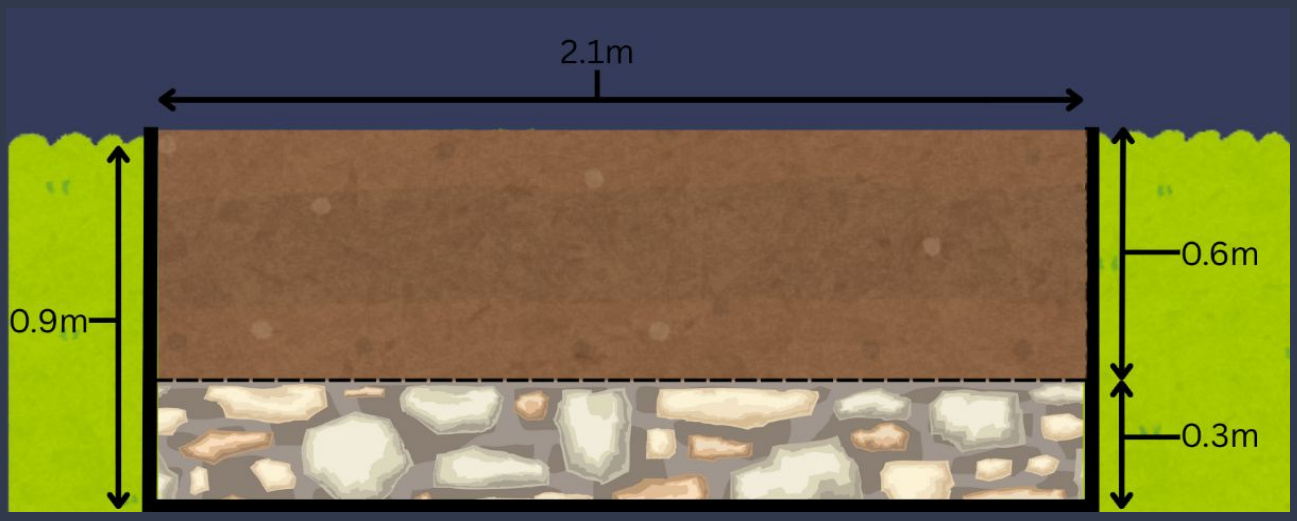
Matapae: ki tāku e matapae nei, ka 30 meneti (whai muri i te whakakā o te ahi) te wā tika.

6. *He aha te rerekētanga o te rua hāngi papaku / papatahi, ki tētahi rua hohonu, whīroki ake?*

Matapae: ki tāku e matapae nei, ka pai ake te hāngi hohonu, whīroki nā te mea, ka wera ake mehemea he hohonu ake tētahi rua.

Te Rua Hāngi mō te Hautapu a TKKM o Ngā Mokopuna 2025



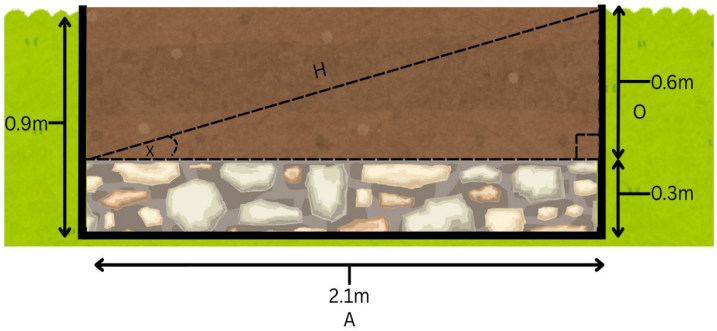


He 0.6m te hohonu o te rua. Kua waiho he 0.3m ki te papa mā ngā kōhatu. Ko te 0.6m (te toenga) te wāhi mā ngā kai. Ko te ine mō te whāroa o te rua ko te 2.1m.

Ko te wāhi mā ngā kai me te wāhi mā ngā kōhatu te wāhi o te katoa o te rua.
0.6m x 2.1m + 0.3m x 2.1m = 0.9m x 2.1m

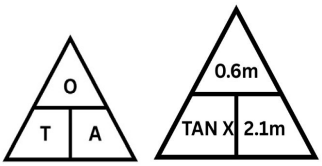
1.26m^2 (wāhi mā te kai) + 0.63m^2 (wāhi mā ngā kōhatu) = 1.89m^2 (te wāhi o te katoa o te rua).

Tauira 1 – Pākoki



Kātahi anō mātou kia mutu te keri i te rua hāngi, heoi anō, kua taka mai tētahi rākau (h) ki roto i te rua. Ko tāku mahi ināianei, he ine i te roa me te putu o te rākau.

Tuatahi ake ko tāku hiahia he ine i te the uara o te koki o '$\mathcal{X}$'. I tēnei wā, e mōhio ana ahau i te uara o te tapa 'O' (0.6m) me te uara o te tapa 'A' (2.1m). Ki te kimi i te uara o '$\mathcal{X}$', ko tāku he whakamahi i te ture o 'TAN' nō roto tonu i te rautaki o pākoki.



Tan $\mathcal{X}$ = 0.6m / 2.1m

Tan $\mathcal{X}$ = 0.2857142857

$\mathcal{X}$ = Tan $^{-1}$0.2857142857

$\mathcal{X}$ = 15.9453959°
15.9° (1m.i)

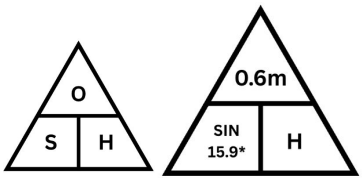
Nā reira, he 15.9° te koki o te rākau kua taka ki roto i te rua. Ināianei, ko tāku hiahia he mōhio i te uara o te tapa 'h'.

Tauira 2 – Pākoki

I runga i te mōhio he 15.9° te koki o te rākau, e āhei ana ahau te kimi i te whāroa o te rākau.

Ki te kimi i te whāroa (te tapa ‘h’), e āhei ana te whakamahi i te ture o ‘SIN/SOH’ o ‘COS/CAH ’ rānei. Nā te mea he “H” ki roto i ērā ture e rua. Nā reira, ahakoa te kōwhiringa ka kimi tonu i te whakautu, te ine o te whāroa o te rākau/tapa ‘H’.

Ko tāku he whakamahi i te ture o ‘SIN/SOH’.



H = 0.6m / SIN 15.9°

H = 2.190106991m
2.19m (2m.i)

Whakautu: E ai ki ēnei tātaitanga, he 2.19m (2m.i) te ine mō te whāroa o te rākau/te tapa ‘h’.

Heoi anō, ko tāku ināianei he kite mehemea e tika ana tēnei whakautu. Nā reira ka whakamahi i te ture o Pythagoras.

Tauira 1 – Te Ture o Pythagoras

Mō tēnei mahi, ka whakamahi i te ture tātai Pythagoras o

nā te mea, tē tāea te whakamahi i te ture o

me te ture o

$h^2 = a^2 + b^2$

$a^2 = h^2 - b^2$

$b^2 = h^2 - a^2$

i te mea kei te mōhio kē ahau i te uara o te tapa ‘a’ me te uara o te tapa ‘b’.

a = 2.1m b = 0.6m h = ?

kia mōhio mai, i roto i tēnei rautaki pāngarau ko te ‘O’ ka huri kē hei B.

(kāore i te mōhio mēnā he tika te whakautu ō muri, 2.19m)

$h^2 = 2.1m^2 + 0.6m^2$

$h^2 = 4.41m^2 + 0.36m^2$

$h^2 = 4.77m$

Nā, ināianei me hoatu tēnei nama ki te pūtake nā te mea kei te hiahia noa i te ‘b’, kaua ko te b^2.

$h = \sqrt{4.77m}$

h = 2.184032967m
2.18m (2m.i)

Te Whakautu

Kia hoki ngā mahara ki te whakautu ō muri (2.19m), ko te take kāore tēnei i te tika i te mea i whakaāwhiwhia e au te whakautu o te putu, ā, i tae atu ki te 2.19m.

Ēngari, mēnā i whakamahi au i te nama katoa mō te putu (15.9453959°), ka tae atu ki te whakautu e tika ana, arā ko te 2.184032967m.
2.18m (2m.i)

Whakautu: He 2.18m (2m.i) te ine mō te whāroa o te rākau/tapa ‘h’.

Nā reira, kia kimi
Nā reira, ko te rōrahi o taku

ko te wāhi e wātea ana ki te taha kai ka rau atu te kai, 2.18m (2m.i)

Tauira 2 - Te Ture o Pythagoras

h = 210m

a = 87m

b = ?

Mō tēnei mahi, ka whakamahi au i tētahi o ngā ture tangohia, arā ko te rautaki kia kimi i te uara o ‘b’

$$b^2 = h^2 - a^2$$

$b^2 = 210m^2 - 87m^2$

$b^2 = 44{,}100m - 7569m$

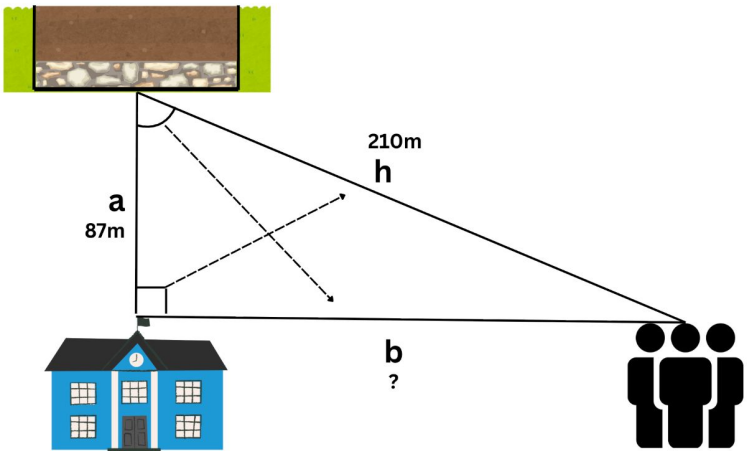
$b^2 = 36441m$

Nā, ināianei me hoatu tēnei nama ki te pūtake nā te mea kei te hiahia noa i te ‘b’, kaua ko te b^2.

$b = \sqrt{36441m}$

b = 190.89m (2m.i)

Whakautu: He 190.89m (2m.i) te tawhiti mai te hunga kaikarakia ki te kura.

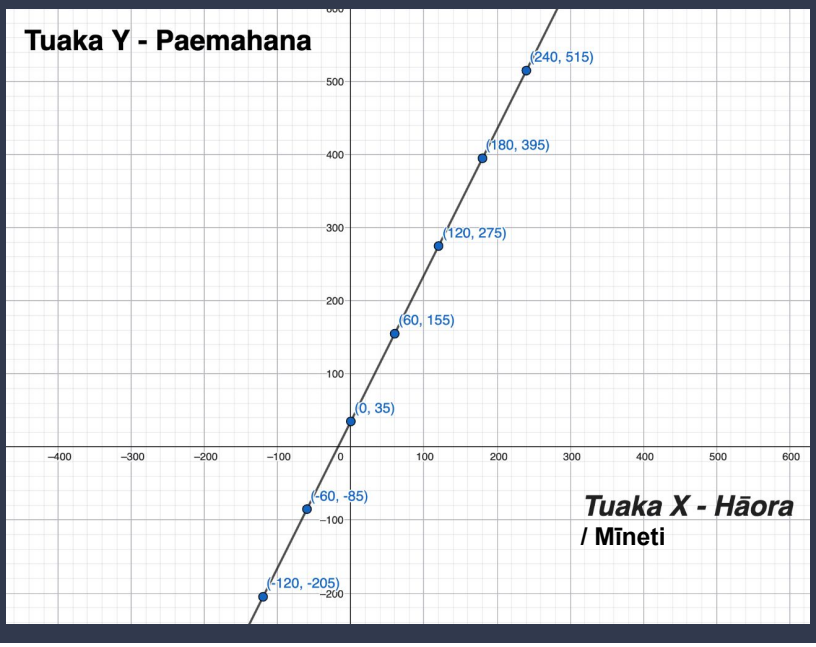


Horopaki: Kātahi anō te takinga o ngā karakia kia mutu, nā, kei te hiahia te whānau te hoki atu ki te kura, hākari ai. He aha te tawhiti mai te hunga kaikarakia ki te kura?

Kōrero āpiti:
Ki te whakaarotia te tapatoru, ko te ‘h’ te tapa roa rawa i ngā wā katoa, ka mutu, ka anga atu te kokona o te koki 90 putu ki a ia hoki.
Ko te tapa ‘a’ te tapa e noho ki waenganui i ngā koki e rua.
Ko te tapa ‘o’ te tapa tauaro ki te koki.
Koinei ngā tohu e mōhio ai tātou i ngā tapa katoa.

Tauira 1 – Whārite rārangi (ngā kauwhata)

Kauwhata 1



Horopaki: Ināianei, ko tāku mahi he whakarite i ngā kōhatu hei tunu i ngā kai.
Tuatahi ake, ka tahuna te ahi kia tīmata te whakamahana i ngā kōhatu. Ko te mahi a ngā kōhatu ki te ahi, he pupuri, he tiaki i tērā mahana, ā, hei te wā ka rau atu ngā kai ki roto, ka tīmata ngā kai te tunu.

E whai ake nei ko te ture ka whāia e au kia tutuki ai te pāngarau whārite rārangi (kauwhata):

y = m $\mathcal{X}$ + c

- **Tuaka Y** – te paemahana (°C)
- **Tuaka $\mathcal{X}$** – ngā hāora (te wā)
- **M** – te rōnaki (te pikinga o te paemahana i ia hāora)
- **C** – te haukotinga Y, te wāhi e tūtaki ana te rārangi i te tuaka Y

I roto i tēnei kauwhata, e whakaatu ana au i te pikinga o te paemahana o ngā kōhatu.
I whakamahia e au he rārangi tōtika nā te mea ka piki te paemahana i te **120°C i ia hāora**.

Ko te ture i whakamahia e au ko:
y = 120° $\mathcal{X}$ + 35°, arā:

- Ka tīmata ngā kōhatu i te paemahana **35°C**,
- ā, ka piki **120°C** i ia hāora.

I tuhia e au ngā wāhi, (0,35), (1,155), (2,275), (3,395), me te (4,515), hei whakaatu i te piki haere o te paemahana o ngā kōhatu.
Ko te tīmatanga o te rārangi kei te 35°C i te tuaka Y, e tohu ana i te paemahana o ngā kōhatu i te tīmatanga. E mōhio ana ahau ka kore ngā kōhatu e tīmata i te **–200°C**, nā te mea tē taea ngā kōhatu te mātao pēnei i te ao tūturu. Engari, i whakamahia e au i taua wāhi kia **kitea rawatia i taku rārangi** i runga i te kauwhata. Kia mārakerake te kite **i te wāhi e tūtaki ai te rārangi ki te tuaka Y**.

Mā tēnei e māmā ake ai te **mārama** ki tāku kauwhata, e whakaatu ana i te āhua katoa o te ture nei, (**y = 120° $\mathcal{X}$ + 35°**). Ehara i te mea ka tīmata ngā kōhatu i taua paemahana, he wāhanga noa tēnei hei whakaatu tika i te ture nei.

I whakamahia e au te ture Y = m $\mathcal{X}$ + c ki te kimi i te paemahana (y) e ai ki te wā / ngā hāora ($\mathcal{X}$).
I roto i taku whārite, ko te 120° te uara o M, nā, ko te 35° te uara o C.

m = 120 and **c = 35**

I ia wā i panoni au i te uara o $\mathcal{X}$, i kimi hoki au i te uara o **y.**
Hei tauira:

- Mēnā ko $\mathcal{X}$ **= –2(120min)**, ko **y = –205°C**
- Mēnā ko $\mathcal{X}$ **= –1(-60min)**, ko **y = –85°C**
- Mēnā ko $\mathcal{X}$ **= 0**, ko **y = 35°C**
- Mēnā ko $\mathcal{X}$ **= 1(60min)**, ko **y = 155°C**
- Mēnā ko $\mathcal{X}$ **= 2(120min)**, ko **y = 275°C**, ā, haere ake nei.

$\mathcal{X}$	Y
-120min	-205
-60min	-85
0	35
60min	155
120min	275
180min	395
240min	515
360min	635

E whakaatu ana tēnei i te pikinga o te paemahana o ngā kōhatu. Ka tīmata i te **35°C**, nā wai rā ka āta piki mai te **120°C i ia hāora**.

E whai ake nei ko ngā mahi kia kimi i te uara o Y e hāngai ana ki te uara o $\mathcal{X}$:

1. Y = m $\mathcal{X}$ + c

Y = 120° (-2) + 35°
Y = **-205**

2. Y = m $\mathcal{X}$ + c

Y = 120° (-1) + 35°
Y = **-85**

3. Y = m $\mathcal{X}$ + c

Y = 120° (0) + 35°
Y = **35**

4. Y = m $\mathcal{X}$ + c

Y = 120° (1) + 35°
Y = **155**

5. Y = m $\mathcal{X}$ + c

Y = 120° (2) + 35°
Y = **275**

6. Y = m $\mathcal{X}$ + c

Y = 120° (3) + 35°
Y = **395**

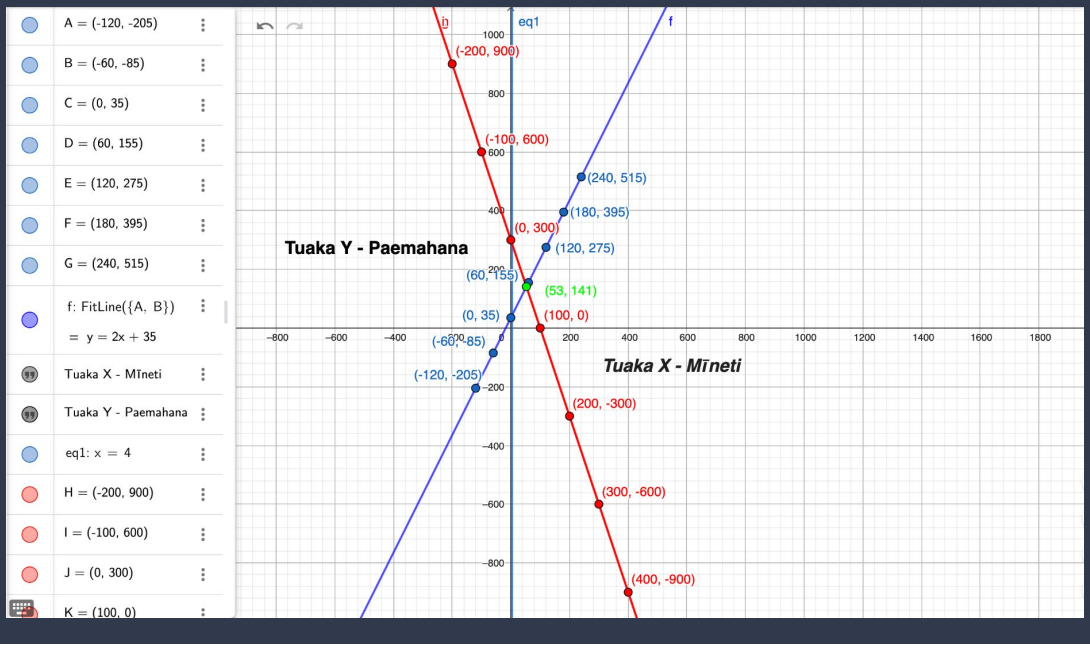
7. Y = m $\mathcal{X}$ + c

Y = 120° (4) + 35°
Y = **515**

8. Y = m $\mathcal{X}$ + c

Y = 120° (5) + 35°
Y = **635**

Kauwhata 1, rārangi 2 (whero)



Te Ture: Y = -2$\mathcal{X}$ + 3

1.
Y = -2(-3) + 3
Y = 9

2.
Y = -1 (-3) + 3

3.
Y = 0 (-3) + 3
Y = 3

4.
Y = 1 (-3) + 3
Y = 0

5.
Y = 2 (-3) + 3
Y = -3

6.
Y = 3 (-3) + 3
Y = -6

7.
Y = 4 (-3) + 3
Y = -9

$\mathcal{X}$	Y
-200	900
-100	600
0	300
100	0
200	-300
300	-600
400	-900

Nā, i te mea kua mōhio ahau i ngā nama raraunga katoa, kua tāpiri ahau i ēnei nama ki te kauwhata ō runga ake.

Nā ngā nama raraunga Y me te X e mōhio ai ahau ko ēhea ngā hoa takirua o te Y me te X e tuhia ai ko ngā pūwāhi i te kauwhata.

Hei tauira, ko te -200min o te raraunga $\mathcal{X}$ me te 900 o te raraunga Y he hoa takirua.

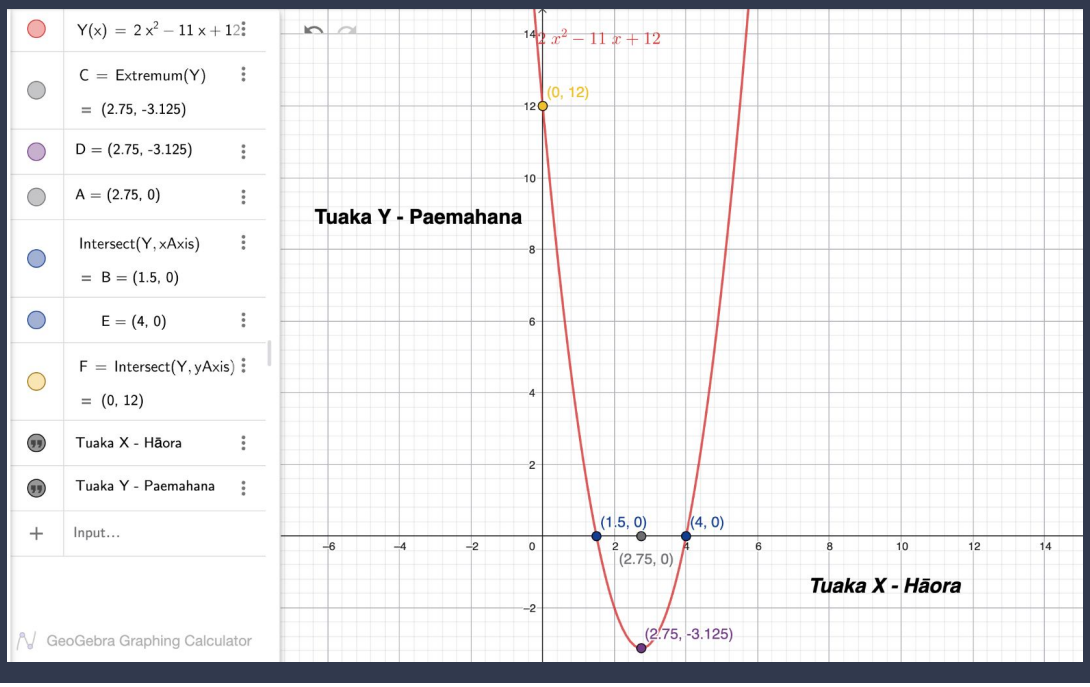
Nā reira, ka tuhia ko te pūwāhi ki te wāhi tonu e tūtaki ai te -200min o te tuaka Y ki te 900 o te tuaka X i runga i te kauwhata.

Ka pērā te mahi mō ia takirua nama raraunga, e kite ai ko te rārangi inenga. Kāti, me maumahara ki te hono i te rārangi mai i tētahi pūwāhi ki tētahi atu.

Nā reira, koo te rārangi whero e tohu ana i te pikinga o te paemahana o ngā kōhatu, ko te pūwahi kākariki (te haukotinga o ngā rārangi e rua) e tohu ana i te wā tika kia rau atu ngā kai ki roto i te rua. Arā ko te, (3,141).

Kōrero āpiti: He poupou ngā rārangi e rua e noho ana ki runga i te kauwhata.

Kauwhata 2 - Unahi



Horopaki:
Kua whakarite mātou i tētahi rua hāngī. E ai ki āku pouako, me rau atu i ngā pepa i te tuatahi, arā ko te **pūwāhi akitu**, ā, he kimi i te wā e tika ana kia tahu i te ahi, arā ko ngā **pūwāhi o te $\mathcal{X}$**. Ko te tohutohu whakamutunga he kimi i te wā e tika ana kia rau atu i ngā kōhatu, arā ko te **haukotinga o te Y**.

Nō reira ko te whainga matua he kimi i ngā pūwāhi / uara o te akitu, o ngā $\mathcal{X}$, me te haukotinga Y.

1. Te Whārite
E whai ake nei ko te whārite ka whakamahia e au mō tēnei mahi.

Y = 2$\mathcal{X}^2$-11$\mathcal{X}$+12

Ka whakawhānui, ka whakatauwehe, ka āta wetewete i tēnei whārite kia kimi i te unahi.

2. Whakaingoa i a A, B, C, mete whakamahi i te ture AxC:
Nā, ka tapaina ko:

A = 2, B = −11, C = 12

Nā, ka whakamahi i te ture AxC.

A×C = 2 × 12 = 24

Ināianei me kimi i ngā tauwehe nui rawa o 24, me ngā hei tāpiri kia tae atu ki te -11.
Nā ko **-3** me **-8**, ērā nama i te mea:

-3 × -8 = 24 -3 + -8 = -11

3. Whakawehe i te whārite:
Y = 2$\mathcal{X}^2$ -3$\mathcal{X}$ -8$\mathcal{X}$ + 12

Y = (2$\mathcal{X}^2$ - 3$\mathcal{X}$)(-8$\mathcal{X}$ + 12)

4. Whakawhānau i ngā nama, ā, ka tangohia ngā tauwehe.
Y = (2$\mathcal{X}^2$ - 3)(-8$\mathcal{X}$ + 12)

Y = $\mathcal{X}$ (2$\mathcal{X}$ - 3) -4 (2$\mathcal{X}$ - 3)

Nā, ka whakakotahi i a $\mathcal{X}$ me -4 i te mea kei waho rāua i te taiapa, ā kei te kite hoki au he ōrite a (2$\mathcal{X}$ − 3) me (2$\mathcal{X}$−3), nō reira ka tangohia i tētahi kia pēnei noa:

Y = ($\mathcal{X}$ - 4) (2$\mathcal{X}$ - 3)

5. Kimi i te haukotinga $\mathcal{X}$
$\mathcal{X}$ - 4 = 0 2$\mathcal{X}$ - 3 = 0

$\mathcal{X}$ = 0 + 4 $\mathcal{X}$ = 0 + 3 / 2
$\mathcal{X}$ = 4 $\mathcal{X}$ = 3/2 ***$\mathcal{X}$ =1.5***

6. Kimi i te nama e noho ana ki waenga i ngā pakiaka e rua (x).
Tuataki ake ka tāpiri i te uara o ngā pakiaka x.

1.5 + 4 = 5.5

Kātahi ka whakawehea ki te 2, nā te mea kei te hiahia i te nama e noho ana i wāenga i ngā pakiaka e rua.

5.5 / 2 = **2.75**

7. Kimi i te Akitū o te unahi:
Nā, ka tōaitia te whārite matua a:

Y = 2x^2-11x+12
Kia kimi i te akitū, me pēnei:
$Y = 2(2.75)^2 - 11(2.75) + 12$

$2.75^2 = 7.5625$ -11 x 2.75 = -30.25
7.5625 x 2 = 15.125

Ā, ka whakakotahi i ēnei nama katoa:

Y = 15.125 - 30.25 + 12

Ka puta ko tāku Y:

Y = -3125

8. Kimi i te haukotinga Y

$Y = 2(0)^2 - 11(0) + 12 = 12$

Whakautu:

He unahi te āhua o tēnei kauwhata. Ko ngā pūwahi e rua o x ko (4,1.5). Ko ngā pūwahi e rua o te akitū ko (2.75, -31(2m.i)). Nā, ko ngā pūwahi e rua o te haukotinga Y ko (0,12).

E ai ki aku tātaitanga, i te wā o te akitū, e tohu ana tērā i te wā e tika ana kia rau atu ngā pepa hei whakarite i te rua mō te ahi. Kātahi i te wā ka tae atu ki te tuaka x, koia tērā e tohu ana i te wā tika kia tahu i te ahi. Nā, i te wā ka tae atu ki te haukotinga Y, he tohu tērā ki au mō te wā e tika ana kia rau atu ngā kōhatu.

Tauira 1 – Rōrahi

Ināianei, ka kaute i te **nui o te kai hei whāngai i te kotahi rau tāngata** mō te hākari o te hautapu.
Ka whakamahia e au te **rōrahi** hei kimi i te nui o te kai ka noho ki ia pereti.
Mā te whakamahi i te rōrahi, ka mārama ahau mehemea ka orite te kai mō te katoa.

E whai ake nei ko te ture ka whāia e au kia tutuki ai te pāngarau - rōrahi.

$V=\pi r^2h$

He **40cm** te whitianga o te pereti, ā, ko tāku e whakapae nei, ka **5cm** te maha o te kai ki runga i ia pereti.

Hatepe 1 - kimi i te uara o 'r', te pūtoro o te pereti.

r = whitianga / 2

r = 40cm / 2 = **20cm**

Hatepe 2 - ki te kimi i te rōrahi o te kai ki runga i te pereti, ka whakamahi i te ture o:

$V=\pi r^2h$

$V = \pi(20cm)^2 \times (5cm)$

$V = \pi(400cm) \times (5cm)$

$V = 6280cm^3$

Whakautu:
He $6280cm^3$ te rōrahi o te kai e noho ana ki runga i ia pereti. Nā reira ki te kimi i te nui o te kai hei whāngai i te kotahi rau tāngata, ka whakarea i tēnei whakautu ki te 100. Ko te whakautu o tērā ko tēnei, $628,000cm^3$.

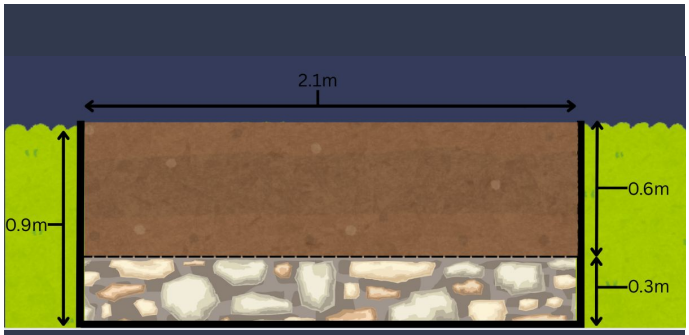
Heoi, ināianei kei te hiahia au te panoni i tēnei. Kia huri i te ine mai te henemita ki te mita. Nā reira,

1 mita = 100 henemita

$1m^3 = (100cm)^3 = 1,000,000$
(orite ki te mahi 100 x 100 x 100 x)

Nā reira, ka:

$628,000cm^3 / 1,000$



I runga i ēnei mōhioranga katoa, ko tāku mahi ināianei he kimi i te nui o te rua hāngi kia āhei te kotahi rau rourou kai / pereti kai te kuhu atu.

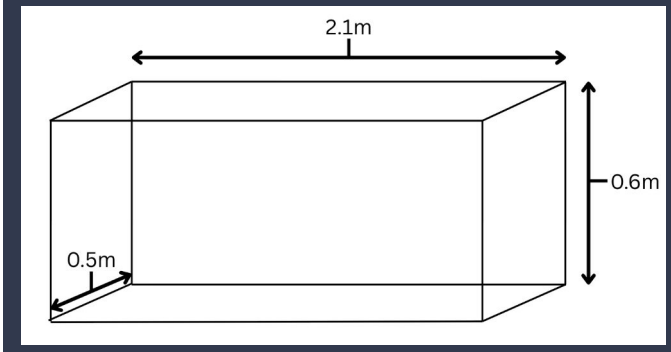
2.1m x 0.6m x $\mathcal{X}$ = 0.6280m^3

Nā reira, $\mathcal{X}$ = 0.6280m^3 / (2.1 x 0.6)

$\mathcal{X}$ = 0.6280m^3 / 1.26m^2

$\mathcal{X}$ = 0.4984^2

$\mathcal{X}$ = 0.49m^2
$\mathcal{X}$ = 0.5m^2



Nā, i runga i te mōhio i te whāroa me te hohonu o te rua, kua kimi au i te whānui:

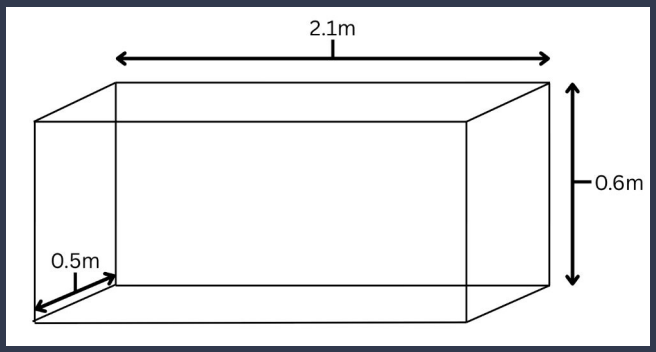
2.1m X 0.6m X 0.5m = 0.63m^3

Whakautu:

Ahakoa he papaku, he papatahi tāku rua hāngi, he whānui tonu. Ko te pāinga o te rua papaku / papatahi , ka tunua katoatia ngā kai, ka mutu, ka tere ake.
Nā, ki te whakaaro mō tētahi rua hāngi hohonu, whīroki hoki, ka tahu pea ngā kai ō raro i te mea he tata ake ngā kai ki te ahi, heoi ko ngā kai ō runga, kua mata tonu.

Nā reira, he pai ake tāku rua hāngi papatahi, tēnā i tētahi mea hohonu, whīroki hoki.

✅



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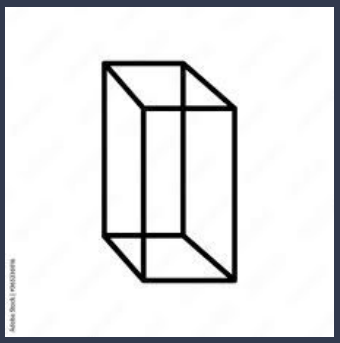

Kairangi

Wāhanga Ako: Pāngarau

Paerewa: 92068

Total Score: 07/08

Pātai	He Pitopito Kōrero
Tahi	E mārakerake ana kua eke tēnei ākonga ki te Kairangi mō te paerewa 92067. Ka whakamahia whānuitia ngā tikanga pāngarau i te horopaki rua hāngī: ka tātai horahanga me te rōrahi, ka whakamahi pāngarau pākoki, te ture Pythagoras, me ngā whārite rārangi me te unahi hei whakaatu i te hononga o te pāmahana me te wā. Ka waihanga kauwhata, ka kimi haukotinga me te akitū, ā, ka whakamārama rawatia ngā hātepe katoa me te tika o te reo pāngarau. Ka hāpono hokitia ngā otinga mā tētahi atu tikanga (hei tauira, te whakamahi i te Pythagoras hei tirotiro i te hua o te pākoki), ā, ka wānanga hoki i te tika o te tauira ki te ao. E whakaatu ana tēnei i te mōhio hōhonu, te whakaaro tūhonohono me te whakaaro waitara, e hāngai pū ana ki te taumata Kairangi.