



NGĀ PUKA RAPANGA PĀNGARAU TAUNAKI

Ine

TAU 5 - 6

Pukapuka Kaiako

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Tūmahi 1

Kua hangaia e Tiana ētahi pikitia mō tōna whānau, ā, e hiahia ana ki te hoko tāpare mō rātou.

Ka aroha, kua whati i a ia tana ruri nā reira me whakamahi koe i tēnei tauine pakaru kia kitea ai te paenga o ngā pikitia mō ngā tāpare. (tirohia ngā matua tārua mō tēnei rauemi)
Ka taea e ngā pikitia te paenga ōrite?

A) Tāhopu i te whakatau tata me te inenga ki ngā henimita. Whakatau tata te paenga i te tuatahi. Whakamahia te tauine pakaru hei kimi i te paenga me te tāhopu i te inenga:
Whakatau tata –
Paenga –

B) Tāhopu i te whakatau tata me te inenga ki ngā henimita. Whakatau tata te paenga i te tuatahi. Whakamahia te tauine pakaru hei kimi i te paenga me te tāhopu i te inenga:
Whakatau tata –
Paenga –

C) Tāhopu i te whakatau tata me te inenga ki ngā henimita. Whakatau tata te paenga i te tuatahi. Whakamahia te tauine pakaru hei kimi i te paenga me te tāhopu i te inenga:
Whakatau tata –
Paenga –

Hei āwhina i te kaiako

I te wā o te whakarewatanga, whakamōhiohia ngā ākonga ki te kupu paenga me te whakamārama ko te tawhiti huri noa i te tapa o tētahi ahanoa papatahi e kīia ana ko tōna paenga. Me whai ahanoa papatahi (pikitia, pukapuka, kāri) me te whakataki i tō matimati huri noa i te paenga, ka tono i ngā ākonga kia mahi anō.

Me whai kape o ngā tauine pakaru.

Kia mōhio mēnā ka mōhio ngā ākonga kāore te tauine pakaru e tīmata mai i te kore kia kore ai e taea te pānui mai i te tau whakamutunga mō te inenga, ā, ka whakamahi i tēnei hei tāpiri i ngā roanga mō te paenga.

Tirohia mēnā kei te tīmata ngā ākonga i te inenga mā te whakarārangi i tētahi raina ki te tapa o te pukapuka e inea ana e rātou, kātahi ka tataui i ngā āputa i waenga i ngā raina hei wae inenga henimita.

Tūmanako kia whakamahi ngā ākonga i te reo inenga tae atu ki te paenga, me te hopu i te whakatau tata me te inenga mā te whakamahi i te whakapotonga cm

Mō te tūmahi takitahi, me whai ahanoa ka taea e ngā ākonga te whakamahi hei ine (hei tauira, centi-cube, multilink, ones cube). Hoatu ki a rātou kia kotahi, kia rua rānei ngā ahanoa.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

E hiahia ana e te māramatanga ariā o te inenga te māramatanga o te atawhai me te whakawhitiwhiti. E hiahia ana e te atawhai te māramatanga ina nekehia, ka wehewehea rānei, ka mau tonu te rahi o tētahi ahanoa. Ko te mōhioanga ka taea te whakataurite i ngā ine o ngā ahanoa e rua ki tētahi ahanoa tuatoru. Hei tauira, mēnā he nui ake te taumaha o te ahanoa A i te ahanoa B, ā, he nui ake te taumaha o te ahanoa B i te ahanoa C, kātahi ka nui ake te taumaha o te ahanoa A i te ahanoa C.

He mātāpono matua e pā ana ki te inenga tae atu ki te rahi o te wae inenga e noho ōrite ana (tae atu ki ngā wae ōrite, ngā wehenga iti rānei), ka tāruatia ngā wae kāore he āputa, he inaki rānei (au), he wāhanga te wae o te katoa, ā, ka whakapuakina te inenga hei tapeke o ngā wae e whakamahia ana.

Wā toha

Tonoa ngā ākonga kia whai rārangi hipanga ka taea e Tiana te whai kia pai ai te ine ki tētahi ture pakaru.

Hono

Mēnā ka oma ahau i te 1 kiromita, e hia mita taku oma? E hia henimita tēnā? E hia mirimita?

Whainga ako: Ka ako ngā mokopuna ki te:

Whakatau tata te roa ki ngā henimita.

Inea te roa ki ngā henimita.

Kimihia te paenga o tētahi ahanoa papatahi.

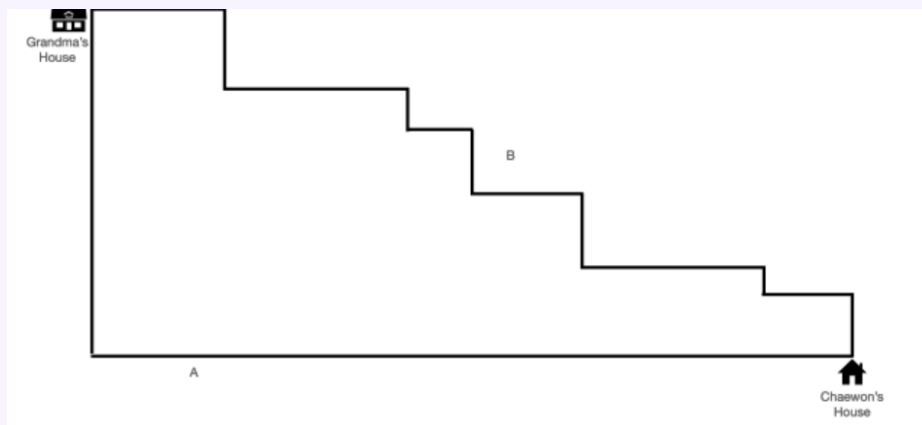
Whakamahia te reo inenga hei whakaahua me pēhea te ine paenga.

Ngā Tūmahi Takitahi

Ka mau a Chaewon i tētahi Uber ki te kite i tōna kuia i ia mutunga wiki. I te nuinga o te wā ka haere te Uber i te ara ōrite (kua tohua A) ā, e \$10 te utu o tēnei. I haere te Uber i tētahi ara rerekē (kua tohua B) i tētahi mutunga wiki.

Ki tōu whakaaro ka nui ake i te \$10 te utu o te ara rerekē i a Chaewon nā te mea he tawhiti kē atu te haerenga?

Tuhia tō matapae, kātahi ka whakamahi i ngā taputapu hei ine me te taki.



Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Reo Pāngarau

Paenga, henimita, roa, wae ine, kaute inenga, tauine.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 2

Whakataua tata te roa o te _____ me te hopu i te wae
whakataua tata me te inenga.
Whakataua tata -

Whakamahia he utauta ine hei ine i te roanga me te tāhopu i te tataua
inenga me te wae inenga.
Inenga -

Tahuri i te inenga ki tētahi wae kē.
Tahuringa inenga -

Hei āwhina i te kaiako

I te wā o te whakarewatanga, hoatu ki ngā ākonga ngā utauta inenga
rerekē (ngā tauine ngahuru me ngā ine rīpene) hei titiro me te kōrerorero.
Tonoa rātau kia titiro ki te tauine mita, ki te ine rīpene rānei me ngā tohu.
He aha te tohu o ngā tau? He aha ngā tohu tāpiri i waenganui i te
henimita? Kīia ko ngā mirimita he henimita kua wehea ki ngā wāhanga
tekau, ā, ka tuhia hei mm. E hia ngā mirimita i roto i te henimita? Ka aha
mēnā ka inea koe ki ngā wae rerekē? Whakangāwari i a rātau kia mōhio
ko te iti ake o te wae, ko te nui ake o te tataua inenga, ā, ko te tuarua.

Me whai tauine henimita, he tauine mita, me ngā ine rīpene.

Tonoa ngā ākonga kia ine i ngā momo ahanoa huri noa i te akomanga kei
raro iho i te mita, i waenganui i te 2 – 5 m me te neke atu i te 5 m te roa.

Tūmanako kia hopu ngā ākonga mā te tuhi inenga tika, kia tika hoki te ine
mā te whakamahi i ngā wae whāranu (hei tauira, mita me ngā henimita).

Whakangāwari i ngā ākonga ki te tahuri i waenga i ngā wae ngahuru
rerekē me te tūhono i tēnei ki te māramatanga o te pūtake tekau.

Mō te tūmahi takitahi, me whai huinga ahanoa hei ine mā ngā ākonga mā
ngā utauta ine rerekē

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai e āhei ana ki te ine tika i ngā
ahanoa mā te whakamahi i ngā utauta inenga, ki te tahuri hoki i
waenga i ngā wae tau oti

Whakaaro Matua

He maha ngā huanga ka
taea e mātau te ine tae
atu ki te roa, te papatipu,
te wā, te horahanga, te
koki, me te rōrahi. Ina ine
mātau, ka whakamahi
mātau i te whakataurite,
ka whakataurite mātau i
ngā āhuatanga pēnei kia
kite ko tēhea te mea nui
ake. Ka taea e mātau te
whakataurite mā te
whakamahi i ngā wae ine
paerewa, paerewa rānei, ā,
ka whakamahi mātau i te
reo pāngarau hei
whakaahua i ēnei.

E hiahiatia ana e te
māramatanga ariā o te
inenga te māramatanga o
te atawhai me te
whakawhitiwhiti. E
hiahiatia ana e te atawhai
te māramatanga ina
nekehia, ka wehewehea
rānei, ka mau tonu te rahi
o tētahi ahanoa. Ko te
mōhiotanga ka taea te
whakataurite i ngā ine o
ngā ahanoa e rua ki tētahi
ahanoa tuatoru. Hei tauira,
mēnā he nui ake te
taumaha o te ahanoa A i
te ahanoa B, ā, he nui ake
te taumaha o te ahanoa B
i te ahanoa C, kātahi ka nui
ake te taumaha o te
ahanoa A i te ahanoa C.

He mātāpono matua e pā
ana ki te inenga tae atu ki
te rahi o te wae inenga e
noho ōrite ana (tae atu ki
ngā wae ōrite, ngā
wehenga iti rānei), ka
tāruatia ngā wae kāore he
āputa, he inaki rānei (au),
he wāhanga te wae o te
katoa, ā, ka whakapuakina
te inenga hei tapeke o ngā
wae e whakamahia ana.

Hono

Mēnā ka oma ahau i te 1 kiromita, e hia mita taku oma? E hia henimita tēnā? E hia mirimita?

Whainga ako: Ka ako ngā mokopuna ki te:

Whakatau tata te roa i roto i te awhe o ngā wae inenga (mm, cm, m).

Inea te roa ki te awhe o ngā wae inenga (mm, cm, m).

Tautuhia te whanaungatanga i waenga i ngā henimita me te mita.

Tautuhia te whanaungatanga i waenga i ngā mirimita me ngā henimita.

Tautuhia te pātahitanga i waenga i ngā mirimita me te mita.

Ngā Tūmahi Takitahi

Whakatau tata i te roanga o ia ahanoa. Tirohia tō whakatau tata ma te utauta ine. Me mātua whakapūkete koe i te wae inenga.

Whakatau Tata –
Inenga –

Whakatau Tata –
Inenga –

Whakatau Tata –
Inenga –

Whakatau Tata –
Inenga –

Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

● *Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.*

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

● *Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.*

Reo Pāngarau

● *Mita, henimita, mirimita, roa, wae inenga, kaute inenga, tauine.*

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 3

Kei te hanga te Kaunihera o Tamaki I tētahi whare pukapuka hou. Ka hangaia mā te whakamahi i ngā kōwae tapawhā. Ka tauinetia ngā tapawhā kia 1 cm e tohu ana i te 1 mita. (tirohia te Tārua matua mō ngā tapawhā)

Whakamahia ngā tapawhā hei hanga i ngā hoahoa rerekē mō te puna. Tāngia huri noa i te whakahuahua ka whakapūkete i te paenga.

He aha te paenga iti rawa ka taea e koe te hanga?

Ka whakatau te kaunihera ki te whakatakoto i ngā pukapuka e whakarārangi ana i ngā pakitara kia uru ai ki te nuinga o ngā pukapuka, e hiahia ana rātou ki tētahi whare me te paenga roa rawa.

He aha te paenga roa rawa ka taea e koe?

Hei āwhina i te kaiako

I mua i tō whakarewatanga i tēnei tūmahi, tonoa ngā ākonga kia tāngia tētahi tauine mai i te pūmahara. Tonoa rātou ki te whakataurite i ngā tātuhi me te kōrerorero he aha te ōrite, te rerekē hoki o ā rātou tātuhi.

Hei whakarewa i te tūmahi, tirohia anō te ariā o te paenga me te tono i ngā ākonga kia tautohu kei hea te paenga o tētahi whare. I te whakarewatanga o te tūmahi, whakaaturia ki a rātou ngā tapawhā me te miramira he 3 cm te roa o ia taha kia ōrite ki te 3 m ina tauinetia.

Hoatu ki ngā ākonga kia 6 ngā tapawhā hei whakamahi.

Whakangāwari i ngā ākonga ki te whakamahi i te whakarōpū me te whakarea hei whakakotahi i ā rātou inenga o ia taha ki te kimi i te roanga katoa o te paenga.

Tūmanako kia tāhopu ngā ākonga i tō rātou inenga paenga mā te whakamahi i te whakapotonga wae tika (cm mō te hoahoa, m rānei ina tauinetia).

Mō te tūmahi takitahi, kia 8 ngā tapawhā e wātea ana hei whakamahi mā ngā ākonga ki te hiahiatia.

Wā toha

Tīpakohia ngā ākonga hei tiritiri nā wai i waihanga ngā tapamaha rerekē ki te paenga ōrite. Pātai atu ki a rātou kia kōrerorero me pēhea e ōrite ai te paenga o ngā tapamaha hanga rerekē. Tīpakohia ngā ākonga hei tiritiri nā wai i waihanga te paenga roa rawa, ā, ka taea te whakamārama me pēhea te kimi paenga.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

He mātāpono matua e pā ana ki te inenga tae atu ki te rahi o te wae inenga e noho ōrite ana (tae atu ki ngā wae ōrite, ngā wehenga iti rānei), ka tāruatia ngā wae kāore he āputa, he inaki rānei (au), he wāhanga te wae o te katoa, ā, ka whakapuakina te inenga hei tapeke o ngā wae e whakamahia ana.

Hono

E hia ngā hoahoa rerekē ka taea e koe te hanga mō te whare pukapuka me te paenga ōrite mā te whakamahi i ngā tapawhā e whā?

Ki te huri koe i te hoahoa o tō whare, ka aha te paenga?

Whainga ako: Ka ako ngā mokopuna ki te:

Waihangatia ngā tapamaha rerekē me te kimi i te paenga o ngā tapamaha rerekē.

Tautuhia ka taea e ngā tapamaha rerekē te paenga ōrite.

Whakamahia te reo inenga hei whakaahua me pēhea te ine paenga.

Ngā Tūmahi Takitahi

Kei te tono te Kaunihera o Tāmaki Makaurau i te āwhina me ngā tūtohunga mō ngā hoahoa o tētahi whare pukapuka hōu. Ka hangaia mā te whakamahi i ngā kōwae tapawhā. Ka tauinetia ngā tapawhā kia 1 cm e tohu ana i te 1 mita. E hiahia ana te kaunihera ki tētahi whare whare pukapuka me te paenga o te 36 m. Whakamahia ngā tapawhā hei hanga i ngā hoahoa rerekē mō te puna.

Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

● *Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.*

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

● *Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.*

Reo Pāngarau

● *Mita, henimita, roa, wae inenga, kaute inenga, tauine, mirimita.*

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 4

I te āwhina a Ashok i tana Māmā ki te mahi i te maha o ngā tāpa e hiahiatia ana e rātau mō ngā pakitara me te papa kaukau. I nekehia a ia, a, kaore i oti.

Ka taea e koe te āwhina mā te mahi i tētahi huarahi tere ki te kimi i te horahanga me te maha o ngā tāpa e hiahiatia ana mō ia mokowā?

(tirohia ngā tauira i roto i ngā Tārua Matua)

Hei āwhina i te kaiako

Me whakawātea ngā tauine mēnā e hiahiatia ana e ngā ākonga ēnei hei tā i ngā wāhanga raina ngaro hei hanga i tētahi mātiti katoa, huānga rānei.

Kia mōhio mēnā ka tāngia, ka tatau takitahi rānei ngā ākonga i ngā tapawhā katoa, mēnā rānei ka whakamahi rātou i te tāpiritanga tukurua, te whakarea rānei. Tirohia hoki mēnā he ākonga ka taea te kite mā te whakamahi i ngā wāhanga kua oti tētahi wāhanga.

Mō te tūmahi takitahi, hoatu ki ngā ākonga ngā tapawhā tae rerekē kua tapahia mai i te tātauira 1 cm² me tētahi pepa pātea.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai i whakamahi i te whakarea hei kimi i te horahanga me te kite i te huānga. Mēnā kāore anō ngā ākonga kia kite i te huānga mā te whakamahi i ngā mea kei reira, whakaurua tēnei hei rongoā kua whakamahia e ngā ākonga i ngā tau o mua.

Hono

Tonoa ngā ākonga ki te whakawhanake i tētahi ture me pēhea te kimi i te horahanga o te tapawhā ka mahi i ngā wā katoa. Whakamātauria ngā ture me te whakawhanake i tētahi whakamāramatanga tiritiri me te whakatikatika.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

E hiahiatia ana e te māramatanga ariā o te inenga te māramatanga o te atawhai me te whakawhitiwhiti. E hiahiatia ana e te atawhai te māramatanga ina nekehia, ka wehewehea rānei, ka mau tonu te rahi o tētahi ahanoa. Ko te mōhiotanga ka taea te whakataurite i ngā ine o ngā ahanoa e rua ki tētahi ahanoa tuatoru. Hei tauira, mēnā he nui ake te taumaha o te ahanoa A i te ahanoa B, ā, he nui ake te taumaha o te ahanoa B i te ahanoa C, kātahi ka nui ake te taumaha o te ahanoa A i te ahanoa C.

He mātāpono matua e pā ana ki te inenga tae atu ki te rahi o te wae inenga e noho ōrite ana (tae atu ki ngā wae ōrite, ngā wehenga iti rānei), ka tāruatia ngā wae kāore he āputa, he inaki rānei (au), he wāhanga te wae o te katoa, ā, ka whakapuakina te inenga hei tapeke o ngā wae e whakamahia ana.

Whainga ako: Ka ako ngā mokopuna ki te:

Whakamahia ngā wae paerewa-kore (tapawhā) hei ine horahanga.

Kimihia te horahanga mā te whakarōpū, mā te whakarea rānei.

Whakamahia te reo inenga hei whakaahua me pēhea te ine horahanga.

Ngā Tūmahi Takitahi

I te āwhina a Ashok i tana Māmā ki te mahi i te maha o ngā tāpa e hiahiatia ana e rātau mō te pakitara kaukau. I nekehia a ia, a, kaore i oti. Ka taea e koe te āwhina mā te mahi i tētahi huarahi tere ki te kimi i te horahanga me te maha o ngā tāpa e hiahiatia ana mō ia mokowā? (tirohia ngā matua tārua)

Marautanga

Tau 5

Whakataua tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

● *Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.*

Whakataua tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakataua tata me te tātai i te:

- Paenga o ngā taparau,
 - horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
 - rōrahi o ngā poro tapawhā.

Tau 6

Whakataua tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

● *Whakaahua ā-hinengaro, ki te whakataua tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.*

Reo Pāngarau

Horahanga, tapawhā, wae ine, tata inenga.

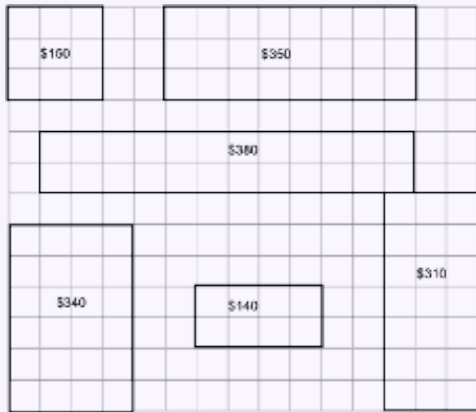
Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 5

Ka hoko te Buiding Aotearoa i ngā matapihi. Ka tatauria e rātau te utu mā te horahanga o te karaehe me te paenga o te tāpare.

Mahia he pēhea rātau i tae atu ai ki ngā utu o ngā matapihi i raro nei:



Hei āwhina i te kaiako

I te wā o te whakarewatanga, whakamaharatia ngā ākonga ki te kupu paenga me te pātai atu ki a rātau kia tautohu kei hea te paenga i runga i te hanga Ahu-2 me te matapaki i te rerekētanga i waenga i te paenga me te horahanga.

Tirohia mēnā ka whakamahi ngā ākonga i te whakarōpūtanga, i te whakareatanga rānei hei kimi i te paenga me te horahanga o ia tapawhā.

Whakangāwari i ngā ākonga ki te hopu i te inenga mō ia matapihi ki tētahi ripanga hei āwhina i a rātau ki te kite i te whanaungatanga i waenga i te utu o te tāpare paenga me te horahanga o te karaehe. Tirohia ina ōrite te horahanga o ngā matapihi e rua, engari he rerekē ngā paenga. Whakangāwari i ngā ākonga ki te tātai i te rerekētanga o te utu hei whakatau i te utu mō ia m mō te paenga. Kia mahara ko te tāpare/paenga he \$5 ia mita me te karaehe \$10m².

Tūmanako kia whakamahi ngā ākonga i te reo inenga tae atu ki te horahanga me te paenga.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai i whakamahi i te whakareatanga ki te kimi i te horahanga me te whakarōpū ki te kimi i te paenga me te whakaoti i te tūmahi mā te tāutu i te utu o ia wāhanga o te paenga me ia inenga horahanga.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

E hiahia ana e te māramatanga ariā o te inenga te māramatanga o te atawhai me te whakawhitiwhiti. E hiahia ana e te atawhai te māramatanga ina nekehia, ka wehewehea rānei, ka mau tonu te rahi o tētahi ahanoa. Ko te mōhiotanga ka taea te whakataurite i ngā ine o ngā ahanoa e rua ki tētahi ahanoa tuatoru. Hei tauira, mēnā he nui ake te taumaha o te ahanoa A i te ahanoa B, ā, he nui ake te taumaha o te ahanoa B i te ahanoa C, kātahi ka nui ake te taumaha o te ahanoa A i te ahanoa C.

He mātāpono matua e pā ana ki te inenga tae atu ki te rahi o te wae inenga e ōrite tonu ana (tae atu ki ngā wae ōrite, wehenga roto rānei), ka tāruatia ngā wae kāore he āputa, he inaki rānei (au), he wāhanga te wae o te katoa, ā, ka whakapuakina te inenga hei tau katoa o ngā wae e whakamahia ana.

Hono

Tāngia kia rua ngā tapawhā ki te papa (4 ki te 4 me te 8 ki te 2) tuhia ngā inenga mō ngā taha e rua. Tonoa ngā ākonga ki te kimi i te paenga, te horahanga, me te utu mō aua matapihi.

Whainga ako: Ka ako ngā mokopuna ki te:

Kimihia te paenga o te tapawhā. Kimihia te horahanga o te tapawhā mā te whakamahi i te whakareatanga.

Whakamahia te reo inenga hei whakaahua me pēhea te ine horahanga.

Whakaotia ngā raruraru whakarea me te wehewehenga.

Ngā Tūmahi Takitahi

Kei te hangaia e Sione he togalaau (taiepa kohatu) me tana Tama. He taiapa tā rātau mo te paenga o te 36 m. Waihangatia ngā hoahoa maha e taea ana e koe, ā, ka tuhia ēnei ki tētahi ripanga me ngā wae inenga:

He aha ngā tauira e kitea ana e koe?

He aha te hoahoa togalaau te mea pai rawa atu? Whakamāramatia he aha.

Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakatau tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakatau tata me te tātai i te:

- Paenga o ngā taparau,
 - horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
 - rōrahi o ngā poro tapawhā .

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakaahua ā-hinengaro, ki te whakatau tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.

Reo Pāngarau

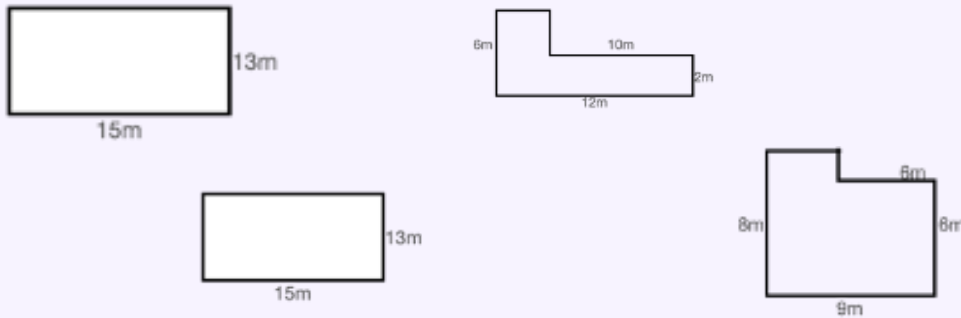
Paenga, henimita, roa, wae ine, kaute inenga, tauine.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 6

Kimihia te horahanga me te paenga o ēnei hoahoa whare



Hei āwhina i te kaiako

Kia mōhio mēnā ka whakamahi ngā ākonga i te whakarōpūtanga, te whakarea rānei hei kimi i te paenga me te horahanga o ia hanga hiato.

Whakangāwari i ngā ākonga ki te hopu tika i ngā wae inenga mō ia mā te whakamahi i te whakapotonga.

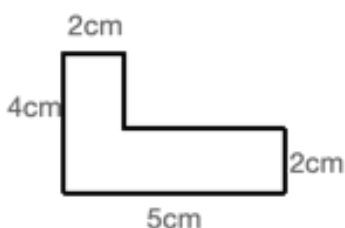
Tūmanako kia whakamahi ngā ākonga i te reo inenga tae atu ki te horahanga me te paenga.

Wā toha

Tīpakohia ngā ākonga hei tiritiri nā wai i wehe i ngā hanga hiato, kātahi ka whakamahi i te whakarea hei kimi i te horahanga o ia wāhanga, ā, ka tāpirihia tahitia.

Hono

I whakaaro a Timo kia kitea te wāhi o tēnei hanga, ka taea e ia te whakarea te 5 ki te 4. Kei te whakaae, kei te whakahē rānei koe ki a Timo? Whakamāramatia he aha.



Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

E hiahia ana e te māramatanga ariā o te inenga te māramatanga o te atawhai me te whakawhitiwhiti. E hiahia ana e te atawhai te māramatanga ina nekehia, ka wehewehea rānei, ka mau tonu te rahi o tētahi ahanoa. Ko te mōhiotanga ka taea te whakataurite i ngā ine o ngā ahanoa e rua ki tētahi ahanoa tuatoru. Hei tauira, mēnā he nui ake te taumaha o te ahanoa A i te ahanoa B, ā, he nui ake te taumaha o te ahanoa B i te ahanoa C, kātahi ka nui ake te taumaha o te ahanoa A i te ahanoa C.

He mātāpono matua e pā ana ki te inenga tae atu ki te rahi o te wae inenga e noho ōrite ana (tae atu ki ngā wae ōrite, ngā wehenga iti rānei), ka tāruatia ngā wae kāore he āputa, he īnaki rānei (au), he wāhanga te wae o te katoa, ā, ka whakapuakina te inenga hei tapeke o ngā wae e whakamahia ana.

Whainga ako: Ka ako ngā mokopuna ki te:

Kimihia te paenga o tētahi hanga mā te whakamahi i ngā roanga taha.

Kimihia te horahanga o ngā hanga hiato.

Ngā Tūmahi Takitahi

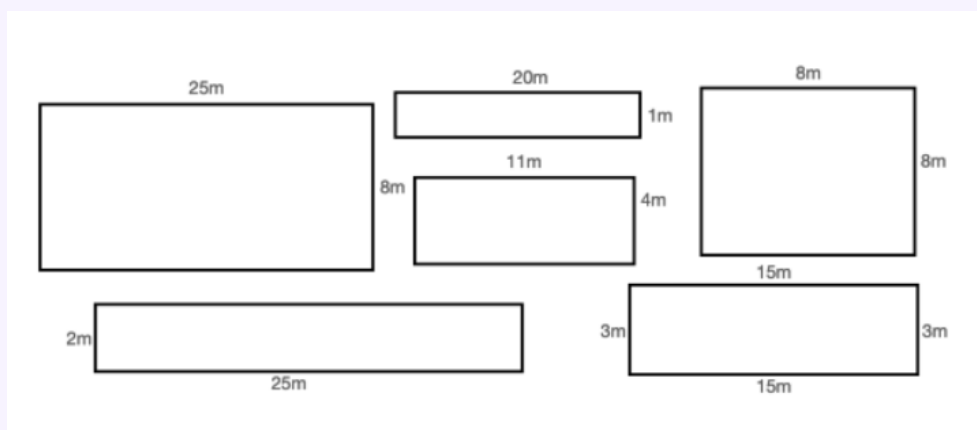
He pono ēnei kōrero i ētahi wā, e kore rawa, i ngā wā katoa rānei:

- 1) Hei kimi i te paenga o tētahi tapawhā ka taea e koe te whakarea te roa o tētahi taha ki te whā.
- 2) Hei kimi i te horahanga o tētahi hanga, ka whakarea e koe te roa ki te whānui.
- 3) Ina tapahia e koe tētahi wāhanga mai i tētahi hanga Ahu-2, ka whakahekea e koe te horahanga me te paenga.

Whakatautikatia ō urupare.

Koinei ngā hoahoa ka taea mō tētahi puna kaukau hāpori hou. Ka taea e koe te kite i te paenga me te horahanga mō ia hoahoa?

Tīpakohia ko tēhea hoahoa pai rawa atu, ā, whakamāramatia he aha.



Marautanga

Tau 5

Whakataua tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakataua tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakataua tata me te tātai i te:

- Paenga o ngā taparau,
 - horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
 - rōrahi o ngā poro tapawhā.

Tau 6

Whakataua tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tīpako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakaahua ā-hinengaro, ki te whakataua tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.

Reo Pāngarau

Mita tapawhā, horahanga, paenga, wae ine, tatau inenga.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 7

Kai te tukuna e Ta'ase he mōkihi ki tōna whānau ki rāwāhi. E hiahiaatia ana e ia he pouaka me te rōrahi $10\,000\text{ cm}^3$.

Kimihia te rōrahi o ngā pouaka kia kite ai mēnā he nui rawa.

Hei āwhina i te kaiako

Hei whakarewa i te tūmahi, whakangāwari i ngā ākonga ki te tūhura i te rōrahi o ngā pouaka maha mā te whakamahi i ngā wae ine ōpaki (hei tauira, ngā paraka, ngā wāhanga lego). Tirohia anō te ariā ko te rōrahi o tētahi ahanoa te nui o te mokowā e pau ana.

Mō te mahi, he maha ngā pouaka iti rerekē te rahi, te hanga hoki. Hoatu ki ngā ākonga he kupiki heneti- (1 cm^3) me ngā kupiki 1000 cm^3 hei ine i te rōrahi.

Whakangāwari i ngā ākonga kia kite e inetia ana tētahi ahanoa e te maha o ngā rōrahi wae e uru ana ki roto. Tērā anō, kia tika ai te inenga, kaua he āputa, he mokowā rānei i waenganui i te 1 cm^3 .

Me tīmata ngā ākonga ki te hanga māori i te tātai me te kore e whakaakona, e whakapakari rānei. Mō te tūhono, he maha ngā huarahi ka taea te hoatu.

Mō te mahi takitahi, me whai momo pouaka me ngā kupiki centi-e wātea ana.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai e ine ana i te rōrahi o ngā pouaka mā te kimi i ngā ahu me te whakamahi i te whakareatanga. Tīpakohia anōtia ngā ākonga hei tiritiri ko wai kua apa i raro i te tuatahi, kātahi ka whakarea te apa o raro hei kimi i te rōrahi.

Hono

Whakaahuatia me pēhea e kitea ai te rōrahi o tētahi pouaka.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

Whainga ako: Ka ako ngā mokopuna ki te:

Whakamāramatia te rōrahi hei mokowā i roto i tētahi ahanoa/ipu.

Whakamahia ngā wae paerewa hei ine rōrahi.

Whakamahia te whakareatanga, te whakarōpū rānei hei kimi i te rōrahi.

Ngā Tūmahi Takitahi

Inea te rōrahi o ia pouaka.

Whakaaturia he pēhea tō kitenga i te rōrahi mō ia pouaka.

Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

● *Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.*

Whakatau tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakatau tata me te tātai i te:

- Paenga o ngā taparau,
- horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
- • rōrahi o ngā poro tapawhā.

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

● *Whakaahua ā-hinengaro, ki te whakatau tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.*

Reo Pāngarau

Rōrahi, henimita pūtoru, kupiki, pūkoro, wae ine, tatau inenga.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 8

Whakamahia ngā kupiki e 48 hei hanga i te maha o ngā whare āhua pouaka (poro tapawhā hāngai) e taea ana. Tāngia ia whare hei whakaaturanga Ahu-3 me te tapa i tēnei hei whakaatu me pēhea tō kimi i te rōrahi.

Hei āwhina i te kaiako

Hei whakarewa i te tūmahi, whakangāwari i ngā ākonga ki te whakaahua i tētahi kupiki Ahu-3 me ōna huanga. Hangaia he hononga ki ngā rerekētanga i waenga i ngā kupiki me ngā kupiki (roa, whānui, teitei). Whakatūpato ko te kupiki he take motuhake o te poroporo tapawhā, ā, ko te poroporo tapawhā he take motuhake o te poroporo tapawhā, ā, he pūkoro katoa.

Kia $48 \times 1\text{cm}^3$ ngā kupiki hei hanga i ngā cuboids.

Whakangāwari i ngā ākonga kia kite he ōrite tonu te rōrahi o tētahi ahanoa (kāore e huri) ina tapahia, ka raunaha anōtia.

Tūmanako kia whakaatu ngā ākonga mā te whakamahi i ngā tātuhi Ahu-3 me te tapa i ēnei.

Whakawātea i ngā kupiki honomaha mēnā e hiahiatia ana mō te tūmahi takitahi.

Wā toha

Tīpakohia ngā ākonga ki te tiritiri kua kitea he maha ngā rautaki rongoā ka taea me te whakaatu me pēhea te kimi i te rōrahi mā te whakarea. Ki te kore he ākonga e whakamahi i te whakareatanga, whakatauiria tēnei mō ngā ākonga me te whakapūkete ($1 \times 48 \times 1$).

Hono

Mēnā e 24 cm^3 te rōrahi o tō whatiato, he aha ngā ahu ka taea?

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

Whainga ako: Ka ako ngā mokopuna ki te:

Tautuhia ngā huanga o te cuboid.

Whakaaturia me pēhea te kimi i te rōrahi o te cuboid.

Kia mōhio koe ka ōrite tonu te rōrahi o tētahi ahanoa ina raunaha anōtia.

Ngā Tūmahi Takitahi

He aha ngā poro tapawhā hāngai ka taea e koe te hanga me ēnei ahu?
He aha te rōrahi mō te poro tapawhāhāngai?

1. E 6 kupiki te roa; e 3 kupiki te whānui; E 2 kupiki te teitei?
2. E 5 kupiki te roa; e 4 kupiki te whānui; E 3 kupiki te teitei?
3. E 4 kupiki te roa; e 3 kupiki te whānui; E 3 kupiki te teitei?
4. E 8 kupiki te roa; e 4 kupiki te whānui; E 2 kupiki te teitei?
5. E 3 kupiki te roa; e 2 kupiki te whānui; ko te teitei ko te 1 kupiki?
6. E 7 kupiki te roa; e 3 kupiki te whānui; E 3 kupiki te teitei?

Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakatau tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakatau tata me te tātai i te:

- Paenga o ngā taparau,
 - horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
 - rōrahi o ngā poro tapawhā.

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakaahua ā-hinengaro, ki te whakatau tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Mataono rite,
porotapawhā hāngai,
mata, akitu, breadt
roanga, teiteitanga, pae,
henimita, cubic
henimita, ahutoru,
ahurua.*

Tūmahi 9

He aha te rōrahi o tō akomanga?

Hei wāhanga o tō whakamārama, tāngia he whakaaturanga hei whakamārama me te whakatika i tō rongoā.

Hei āwhina i te kaiako

Hei whakarewa i te tūmahi, whakaaturia ki ngā ākonga ngā pikitia o ngā mokowā nunui (ipu kaipuke, taraka whakamātao) me te whakangāwari i te kōrero ki ngā ākonga me nui ake ngā ine rōrahi i te whakamahinga o ngā henimita whatianga (cm³).

Whakaritea he mita pūtoru (whakamahia ngā tauine mita me te kāri me te nūpepa hei hanga, hei whakamahi rānei i ngā mea kua whakaritea kētia).

Whakamahia te kupu mita pūtoru me te pūkete hei 1 m³.

Whakangāwari i ngā ākonga kia mārama ko te rōrahi te mokowā i roto i tētahi wae.

Tūmanako kia whakamahi ngā ākonga i ngā pātahitanga whakarea hei whakaaro i te rōrahi me te whakatika i tēnei ki tētahi whakaaturanga Ahu-3.

Mō te mahi takitahi, me whai momo pikitia o ngā mokowā tapawhā rerekē (hei tauira, ipu kaipuke, whare putunga, akomanga, nohoanga, aquarium).

Wā toha

Tīpakohia ngā ākonga ki te tiritiri ko wai kua whakamahi i tētahi whakaaturanga Ahu-3 me te tohu mita pūtoru hei whakatika i te ine rōrahi.

Hono

Tonoa ngā ākonga kia matapae mō te rōrahi o tētahi atu mokowā kura mā te whakamahi i ngā mita pūtoru me te tuhi i tētahi whakaaturanga Ahu-3 hei whakamārama me te whakatika i ā rātou whakaaro.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

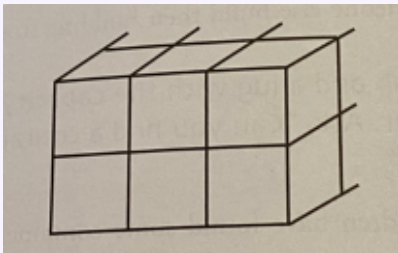
Whainga ako: Ka ako ngā mokopuna ki te:

Whakataua tata te rōrahi i roto i ngā mita pūtoru mā te whakamahi i ngā tohutohu.

Whakamahia te whakaaro whakarea hei kimi rōrahi mokowā.

Ngā Tūmahi Takitahi

Kei a Melania tēnei pikitia o te pito o mua o tētahi pouaka tapawhā.



He aha pea te rōrahi o te pouaka?
Kotahi anake te whakautu, neke atu rānei? Whakamārama,
whakatautika hoki i tō whakautu.

Marautanga

Tau 5

Whakataua tata me te ine i te roa, te horahanga, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakataua tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakataua tata me te tātai i te:

- Paenga o ngā taparau,
 - horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
 - rōrahi o ngā poro tapawhā.

Tau 6

Whakataua tata me te ine i te roa, te rōrahi, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakaahua ā-hinengaro, ki te whakataua tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.

Reo Pāngarau

Mita pūtoru, poro tapawhā hāngai, kupiki, rōrahi, roa, whānui, teitei.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 10

Kimihia kia rua ngā ipu e ōrite ana te kaha, ka nui ake i te rita engari he rerekē te hanga.

Whakamātauria he ōrite, he tata rānei te kaha o rātou. Whakapūketetia te kaha o ia ipu mā te whakamahi i te mL me te l.

Me mātua whakamārama koe me te whakatika i tō whakaaro mā te whakamahi i ngā whakaaturanga maha tae atu ki te raina-tau.

Hei āwhina i te kaiako

Hei whakarewa i te tūmahi, whakaaturia ki ngā ākonga he ipu me ngā tohu miritori, ā, tonoa rātou kia whārōrō i tētahi raina tau kia ōrite ki te tauine.

Whakangāwari i ngā ākonga kia kite me ōrite te mokowā o ngā tohu i te raina tau nā te mea ko ngā mokowā i waenganui i a rātou e tohu ana i ngā poro e ōrite ana te kaha/rōrahi.

Me whai awhe utauta ine (ngā tipu, ngā kapu, ngā koko ine) me ngā mehua rerekē kua tohua, ā, kia āta mātakitaki i ngā ākonga e kōwhiri ana i ngā mehua kāore i te tika.

Whakangāwari i ngā ākonga kia mōhio ko te kotahi rīta ko te 1000mL. Pēhia kia eke ki runga ake i te 1 rīta tae atu ki te whakamahi i te reo hautanga. Hangaia he hononga ki ngā kupu, te mirimita, me te mitamano, ā, ko te kupu milli e tohu ana i te mano.

Wā toha

Tīpakohia ngā ākonga hei tiritiri kua whakamahi i ngā momo whakaaturanga tae atu ki tētahi raina tau me ngā tohu mokowā ōrite hei tohu i te rōrahi ōrite i waenga i ngā inenga. Whakahauhau me te whakatauiria i te whakamahinga o te reo inenga wae paerewa (hei tauira, mirimita, rīta, 500 mL te haurua ki te 1L)

Hono

Me whai raina tau kua tohua mai i te 50 mL ki te 1000 mL ki tētahi tauine engari kāore he tau kē. Pātai atu ki ngā ākonga kia tautohu e hia ngā mirirīta ka whakaaturia i ētahi wā.

Me whai raina tau kua tohua mai i te 50 mL ki te 2 rita ki tētahi tauine engari kāore he tau kē. Pātai atu ki ngā ākonga kia tautohu e hia ngā rīta me ngā mirirīta ka whakaaturia i ētahi wā.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

Whainga ako: Ka ako ngā mokopuna ki te:

Whakamahia ngā wae paerewa (mirirāta me ngā rāta) hei whakaahua me te ine i te kaha.

Tātaitia ngā tau o ngā wae hei whakaahua i te inenga.

Tahurihia ngā wae ngahuru o ngā mirimita (ml) ki ngā rāta (l).

Ngā Tūmahi Takitahi

Tautuhia te huanga e inetia ana: Rōrahi, kaha, papatipu

Te nui o ngā mea e hanga ana i te hipi.

Te nui o te rongoā wai i hoatu ki te tangata

Te nui o te mokowā i roto i te ipu kaupuke

Te mokowā i roto i te tēneti

Te wai i roto i te hōpua

Te nui o te take e hanga ana i te taraka miraka

Te nui o te take e hanga ana i te pōkai raihi

Marautanga

Tau 5

Whakataua tata me te ine i te roa, te horahanga, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakataua tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakataua tata me te tātai i te:

- Paenga o ngā taparau,
 - horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
 - rōrahi o ngā poro tapawhā.

Tau 6

Whakataua tata me te ine i te roa, te rōrahi, te taumaha, te kitanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakaahua ā-hinengaro, ki te whakataua tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.

Reo Pāngarau

Te kaha, te mirimita, te rāta, ngā tohu inenga, te tauine.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 11

Kimihia e toru ngā mea e 1.5 kirokaramu te tapeke.

Tāngia he raina tau hei tohu i te mehua papatipu o ia tūemi, ā, ka whakaatu he pēhea te 1.5 kirokaramu o te papatipu whakaaro.

Ināianei whakamahia ngā tauine hei taki i te papatipu o ia ahanua ki tō whakatau tata.

Tāngia tētahi atu raina tau hei tohu i te ine papatipu o ia tūemi mai i te tauine me te whakaatu i te papatipu takitahi me te paheko.

He pēhea te tata ki te 1.5 kirokaramu i tō whakaaro?

Hei āwhina i te kaiako

Hei whakarewa i te tūmahi, pātai atu ki ngā ākonga mēnā kua rongorātou i te kupu 'gram' me te 'kirokaramu' me ō rātou whakaaro. Me whai centi-cube (1 gm) me ngā pēke ahanua e ōrite ana ki te 500 grams me te 1 kg. Tukuna ngā tauira ki te hiki, ki te pupuri i a rātau. Kōrerorerotia te whakamahinga o te g mō ngā karamu me te kirokaramu hei tāhopu i ngā ine papatipu.

Whai tauine tairitenga/mamati me te tīpakonga ahanua.

Whakamahia te kupu kimi i te papatipu me te kaua e pauna. Whakangāwari i ngā ākonga ki te whakamahi i ngā kupu nui ake, iti iho rānei, kaua e taumaha ake, māmā ake rānei. ērā atu rānei. Kōrerorerotia te whakamahinga o te mg, g me te kiro, me ngā ira me ngā hautanga hei whakaahua me te hopu i ngā ine papatipu.

Kia mōhio mai, ko te papatipu o tētahi ahanua te nui o ngā mea i roto. Ko te papatipu o te ahanua e inetia ana e te maha o ngā wae nui e whārite ana. Ko te kirokaramu he wae whakaae ā-motu, ao whānui hoki (paerewa ngahuru) mō te ine papatipu, ā, ka whakapūketetia hei kirokaramu me te wetereo hei g.

Ka kitea e ngā unahi te taumaha o tētahi ahanua. Ko te tō-ā-papa tēnei e kawea ai ki te Ao (tō ā-papa). Heoi anō, nā te mea he tata ōrite te tō ā-papa i ngā wāhi katoa o te Ao, he pai te whakaaro o te taumaha o tētahi ahanua.

Wā toha

Tīpakohia ngā ākonga hei tiritiri kua tata tata ki te 1.5 kirokaramu (tae atu ki raro me runga).

Whakaaro Matua

He mātāpono matua e pā ana ki te inenga tae atu ki te rahi o te wae inenga e ōrite tonu ana (tae atu ki ngā wae ōrite, wehenga roto rānei), ka tāruatia ngā wae kāore he āputa, he inaki rānei (au), he wāhanga te wae o te katoa, ā, ka whakapuakina te inenga hei tau katoa o ngā wae e whakamahia ana

Hono

Pātai atu ki ngā ākonga kia whakamārama, kia whakatautika hoki ko tēhea mehua e tata ana ki te 1.5 kirokaramu.

1 kiroki me te 49 g, 1490 g rānei

1.511 kiro, 1490 g rānei

1500 g, 1 1/2 kiro, 1 1/2 kiroki rānei

Whainga ako: Ka ako ngā mokopuna ki te:

Whakatau tata te papatipu o ngā ahanoa i roto i ngā karamu me ngā kirokaramu.

Kimihia te papatipu o ngā ahanoa i roto i ngā karamu me ngā kirokaramu mā te whakamahi i te tauine.

Tahuri grams ki te kirokaramu.

Whakamahia te reo inenga hei whakaahua i te inenga o te papatipu.

Whakamahia ngā tauine paerangi hei tohu papatipu

Ngā Tūmahi Takitahi

Whakaotia ngā pātai kōwhiringa maha tuatahi, kātahi ka tuhi 10 anō māu ake.

He papatipu tō tētahi māpere, tata ki

1 g 50 mg 5 g

Tērā pea, he papatipu tō tētahi tangata, tata ki

80 kg 8 kg 8 g

He papatipu tō tētahi taraka, tata ki

500 kg 5 t 500 g

He papatipu tō tētahi tohorā nui, tata ki

20 g 50 kg 50 t

He raukaha tō tētahi koko tī, tata ki

300 ml 5 ml 5 l

He raukaha tō tētahi kapu wai, tata ki

350 ml 5 ml 1 l

Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakatau tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakatau tata me te tātai i te:

- Paenga o ngā taparau,
 - horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
 - rōrahi o ngā poro tapawhā.

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tipako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

Whakaahua ā-hinengaro, ki te whakatau tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.

Reo Pāngarau

Papatipu, orite, manokaramu, karamu, āwhata.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 12

Mo te rā whānau o Maia, ka tonoa e tōna whānau he pounamu iti o ngā inu ngohengohe whāranu. E 635 ml inu i roto i ia pounamu.

E 60 ngā pounamu i hokona e rātau, engari e 47 noa iho ngā pounamu i whakamahia.

E hia ngā rīta me ngā mirimita i whakamahia?
E hia ngā rīta me ngā mirimita e toe ana?

Hei āwhina i te kaiako

Hei whakarewa i te tūmahi, tūhura i ngā ipu āhua rerekē (pounamu inu) e pupuri ana i ngā mirirīta me ngā rīta.

Tūmanakohia kia tohu ngā ākonga mā te whakamahi i ngā whārite.

Whakangāwari i ngā ākonga ki te hanga tūhononga e pā ana ki te tahuri i waenga i ngā mirirīta me ngā rīta.

Wā toha

Tīpakohia ngā ākonga hei tiritiri e whakamahi ana i te āhuatanga tuari, i te ōrite rānei me te utu, ā, kua mōhio rātou he ōrite te 1000 mL ki te rīta, ā, ka tahuri i waenga i ngā wae ine e rua.

Hono

Kōrerorerotia me te tūhura i te whakamahinga o ngā ā-ira hei hopu i ngā rīta me ngā mirimita. Whakatauiria me pēhea e tāhopu ai koe i te 1400 mirirīta hei 1.4 rīta. Tonoa ngā ākonga kia tahuri i ēnei e whai ake nei:

1800 mirimita ki ngā rīta

2.5 rīta ki ngā mirimita

900 mirimita ki ngā rīta

1.25 rīta ki ngā mirimita

75 mirimita ki ngā rīta.

Whakaaro Matua

He maha ngā huanga ka taea e mātou te ine tae atu ki te roa, te papatipu, te wā, te horahanga, te koki, me te rōrahi. Ina ine mātou, ka whakamahi mātou i te whakataurite, ka whakataurite mātou i ngā āhuatanga pēnei kia kite ko tēhea te mea nui ake. Ka taea e mātou te whakataurite mā te whakamahi i ngā wae ine paerewa, paerewa rānei, ā, ka whakamahi mātou i te reo pāngarau hei whakaahua i ēnei.

He mātāpono matua e pā ana ki te inenga tae atu ki te rahi o te wae inenga e noho ōrite ana (tae atu ki ngā wae ōrite, ngā wehenga iti rānei), ka tāruatia ngā wae kāore he āputa, he īnaki rānei (au), he wāhanga te wae o te katoa, ā, ka whakapuakina te inenga hei tapeke o ngā wae e whakamahia ana.

Whainga ako: Ka ako ngā mokopuna ki te:

Whakaotia ngā raruraru whakarea e pā ana ki te kaha tae atu ki ngā mirirāta me ngā rāta.

Tahuri i waenga i ngā manorita me ngā rāta.

Ngā Tūmahi Takitahi

Tīpakohia tētahi, ētahi rānei o ngā tūmahi aromatawai e whai ake nei (kua āpitihia ki te mutunga o te tuhinga) hei tūmahi takitahi:

Tūmahi Aromatawai 1: Horahanga me te Paenga

Tūmahi Aromatawai 2: Rōrahi

Marautanga

Tau 5

Whakatau tata me te ine i te roa, te horahanga, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

● *Whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.*

Whakatau tata ka ine ai i ngā horahanga me ngā rōrahi māmā.

Whakatau tata me te tātai i te:

- Paenga o ngā taparau,
- horahanga o tētahi āhua kua kapi ki ngā tapawhā, ki tētahi wāhanga rānei o te tapawhā
- rōrahi o ngā poro tapawhā.

Tau 6

Whakatau tata me te ine i te roa, te rōrahi, te taumaha, te kītanga, me te roa mā te whakamahi i ngā tohu ine tika, he kohinga ine rānei.

Tīpako me te whakamahi i ngā waeine me ngā taputapu e tika ana mō te mahi e inea ana.

● *Whakaahua ā-hinengaro, ki te whakatau tata, ki te tātai hoki i te horahanga o ngā tapawhā hāngai me te rōrahi o ngā poro-tapawhā hāngai mā te whakamahi whakareatanga.*

Reo Pāngarau

Papatipu, iti iho te nui, nui ake, ōrite te papatipu, kirokaramu, gram, unahi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Aromatawai 1

Tāngia ngā hanga rerekē e 24 cm te paenga. Ko tēhea te hanga ka nui rawa te horahanga?
Whakaaturia he pēhea tō mahi i te rohe.

Aromatawai 2

E hiahia ana a Cadbury ki te hanga i tētahi pouaka hou mo a rātau tiakarete. Ko ia tiakarete he kupiki e ine ana i te 2 cm

E hiahia ana rātau ki te whakauru i ngā tiakarete e 24 ki roto i te pouaka. Ka taea e koe te hoahoa i ētahi kōwhiringa rerekē hei kōwhiri mā rātou me te whakauru i ngā inenga me te rōrahi o ngā pouaka?