

Te Pōtae*

Ko ngā kaupapa pāngarau e whai wāhi atu ana ki tēnei ngohe:

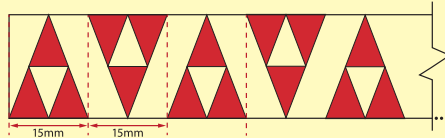
- Ko te tauira tāruarua
- Ko ngā panoni matua nei, te whakaata, te huri, te neke me te whakarahi
- Ko te whakaatu pānga ki te tūtohi
- Ko te whakamahi whārite hei whiriwhiri i ngā taurangi o tētahi pānga
- Ko te whakamāori kauwhata rautō

Ko ngā kupu pāngarau matua:

tauira tāruarua, huānga, pūtake, panoni, whakaata, huri, neke, whakarahi, tūtohi, whārite, kauwhata rautō

Ko te mahi a Hinewai, he raranga pōtae hei hoko i te māketē ka tū i ia Rātapu. Koia nei te āhua o ana pōtae:

Kei te hoahoa ia i tētahi tauira hei tā ki te tāhei. Koia nei te fimatanga o tana tauira:

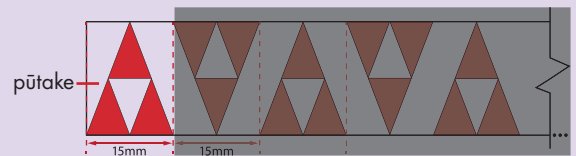


Hei Mahi 1

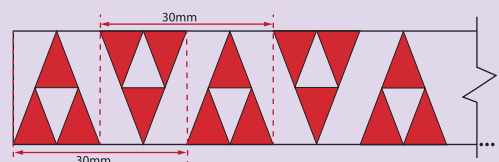
a) Whakamāramahia te tauira. He aha te wāhanga pūtake o te tauira? He pēhea nei te tāruarua a Hinewai i te pūtake?

E mōhio ana te ākonga ki ngā kupu pāngarau hei whakamārama panoni, hei whakamārama hoki i te tāruaruatanga o te tauira. Arā:

- Koia nei te pūtake o te tauira. He tapatoru 'tihi runga', e toru ngā tapatoru iti kei roto.



- E 30mm te neke whakamatau i te pūtake hei tārua i te huānga tua-3, tua-5, tua-7, haere ake.
- E 30mm te neke whakamatau i te pūtake hei tārua i te huānga tua-2, tua-4, tua-6, haere ake.



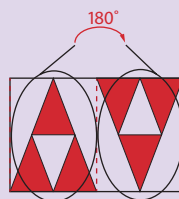
e) E toru ngā rahinga pōtae ka rarangahia e Hinewai:

- E 51cm te roa o te tāhei, huri āmio i te **pōtae iti**
- E 54cm te roa o te tāhei, huri āmio i te **pōtae waenganui**
- E 57cm te roa o te tāhei, huri āmio i te **pōtae nui**

E hia ngā tāruaruatanga o te pūtake o te tauira i tēnā pōtae, i tēnā pōtae?

h) Mo ia rahinga pōtae, he aha te huānga whakamutunga o te tauira, ko te tapatoru 'tihi runga' ko te tapatoru 'tihi raro' rānei?

- Ka hurihia te pūtake hei tārua i te huānga tuarua o te tauira.



Ka whai rautaki te ākonga ki te whiriwhiri i te maha o ngā tāruaruatanga. Hei tauira:

- Pōtae Iti (51cm): $51 \div 1.5 = 34$ ngā tāruaruatanga (mā te tātaitai)
- Pōtae Waenganui (540mm): E hia ngā 15 kei roto i te 540?

Ngā Tāruaruatanga	10	20	30	40
Te Roa (mm)	150	300	450	600

E 36 ngā
 15 kei
 roto i te 540

35
 ↓
 525 → (540)
 +15

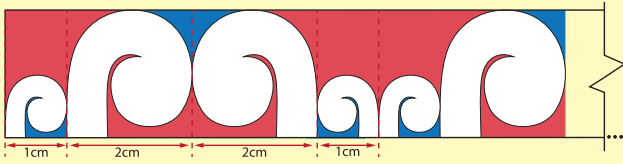
- Pōtae Nui (57cm): Kotahi tāruaruatanga te rahi ake i te Pōtae Wenganui. Nō reira e 37 ngā tāruaruatanga o te pūtake.

Ka whai rautaki te ākonga ki te whiriwhiri i te huānga whakamutunga. Hei tauira:

- Pōtai Iti: E 34 ngā tāruaruatanga. He taurua tēnei. He 'tihi raro' ia tapatoru taurua (2, 4, 6, 8 ...).
- Pōtae Waenganui: E 35 ngā tāruaruatanga. He taukehe tēnei. He 'tihi runga' ia tapatoru taukehe (1, 3, 5, 7 ...).
- Pōtae Nui: E 36 ngā tāruaruatanga. He taurua tēnei. He 'tihi raro' ia tapatoru taurua (2, 4, 6, 8 ...).

Hei Mahi 2

He tāhei atu anō tēnei kua hoahoatia e Hinewai:



a) E rite ana te taurira nei ki tēhea o ēnei:

- AEAE ...
- AEHHAIEHH ...
- AEHIAEHI ...
- AEAlAEAl ...

e) Whakamāramahia te panoni o te koru tuatahi, e hua mai ai te koru tuarua.

h) Whakamāramahia te panoni o te koru tuarua, e hua mai ai te koru tuatoru.

i) E hia ngā koru kei te pūtake o te taurira?

k) E toru ngā rahinga pōtae ka rarangahia e Hinewai:

- E 51cm te roa o te tāhei, huri āmio i te **pōtae iti**
- E 54cm te roa o te tāhei, huri āmio i te **pōtae waenganui**
- E 57cm te roa o te tāhei, huri āmio i te **pōtae nui**

E hia ngā tāruaruatanga o te pūtake o te taurira i tēnā pōtea, i tēnā pōtae?

E mōhio ana te ākonga ki te whakamahi pū hei whakaata i te tāruaruatanga o te taurira. Arā, ka tautohua te pūtake o te taurira, ā, ka kitea ngā huānga rerekē e 4 o te pūtake. Nō reira ko te AEHI AEHI te taurira pū e hāngai ana.

E mōhio ana te ākonga ki te panoni nei, te whakarahinga, ā, ka tautohua e ia ko te 2 te taurahi. Arā, e 2 whakareatanga te rahi ake o te koru tuarua i te koru tuatahi. He haurua te rahi o te koru tuatahi i te koru tuarua.

E mōhio ana te ākonga ki te panoni nei, te whakaatanga. Arā, he poutū te rārangi whakaata kei waenganui pū i te koru tuarua me te koru tuatoru.

E kite ana te ākonga i ngā koru rerekē e 4 o te pūtake, ā, koirā te huinga koru ka tāruaruatia.

Ka whai rautaki te ākonga ki te whiriwhiri i te maha o ngā tāruaruatanga. E 6cm te roa o te pūtake o te taurira, nō reira:

- Pōtae Iti (51cm): $51 \div 6 = 8.5$ ngā tāruaruatanga (mā te tātaitai)
- Pōtae Waenganui: $54 \div 6 = 9$ ngā tāruaruatanga (meka matua).
- Pōtae Nui: E 3cm te rahinga ake i te Pōtae Waenganui. He haurua tēnei o te pūtake. Nō reira e 9.5 ngā tāruaruatanga.

Hei Mahi 3

- a) E \$3 te utu hei hoko mā Hinewai i ngā tāhei mō ia pōtae, koirā noa iho te utu hei hanga māna i ngā pōtae. Whakaotia te tūtohi nei:

te maha o ngā pōtae	1	2	3	4	5	10
te utu (\$)	3					

- e) Whakamāramahia tēnei whārite i tuhia e Hinewai:

$$U = 3p$$

- i) Whakamahia te whārite nei hei whiriwhiri i te utu ka utua e Hinewai mēnā 15 ngā pōtae ka oti i a ia.

- k) Whakamahia te whārite nei hei whiriwhiri i te maha o ngā pōtae ka oti i a Hinewai mēnā e \$63 te utu ka utua e ia.

Hei Mahi 4

Ka hokona e Hinewai ana pōtae mō te \$30.



E \$50 te utu hei whakatū māna i tana wāhi hokohoko i te māketē.

Ka tuhia e ia tēnei whārite hei tātai i ngā moni hua:

$$M = 30p - 3p - 50$$

Ka mārama te ākongā ki te āhua o te pānga whakarea mānā. Arā:

te maha o ngā pōtae	1	2	3	4	5	10
te utu (\$)	3	6	9	12	15	30

E mōhio ana te ākongā ki te whārite taurangi hei whakaata i tētahi pānga whakarea mānā. Arā, i konei ko te U hei tohu i te utu o ngā tāhei. Ko te p hei tohu i te maha o ngā pōtae. ka whakareatia te maha o ngā pōtae ki te 3 hei whiriwhiri i te utu.

E mōhio ana te ākongā ki te whakamahi whārite hei whiriwhiri taurangi. Arā:

$$\begin{aligned} U &= 3p \\ &= 3 \times 15 \\ &= 45 \text{ (e } \$45 \text{ te utu)} \end{aligned}$$

E mōhio ana te ākongā ki te whakamahi whārite hei whiriwhiri taurangi. Arā:

$$\begin{aligned} U &= 3p \\ 63 &= 3p \\ 63 \div 3 &= p \\ 21 &= p \text{ (e } 21 \text{ ngā pōtae)} \end{aligned}$$

- a) Ko te $30p$ te wāhanga o te whārite hei tātai i te moni ka kohia e Hinewai. Ko te p e tohu ana i te maha o ngā pōtae ka hokona e ia. He aha i whakareatia ai ki te 30?
- e) Whakamāramatia te wāhanga tuarua o te whārite, arā, te $' - 3p'$.
- h) Whakamāramatia te wāhanga tuatoru o te whārite, arā, te $' - 50'$.
- i) Whakamahia te whārite hei whakaoti i te tūtohi nei:

te maha o ngā pōtae ka hokona	5	6	7	10	15
te hua moni ka riro i a Hinewai (\$)					

Hei Mahi 5

Ka inea e Hinewai ngā māhunga o ētahi tāngata 24, ā, ka tuhia ngā inenga ki tētahi kauwhata rautō:

58	1							
57	3							
56								
55	2	8						
54	0	0	2	8				
53	1	3	3	6	7	7		
52	4	5	7	8				
51	2	6	6	9				
50	5	7						



- a) Ko te 50.5cm māhunga iti rawa atu i inea e Hinewai. E hia mitarau huri āmio i te māhunga nui rawa atu i inea e ia?

E mōhio ana te ākongā ki te whārite taurangi hei whakaata i tētahi pūāhua whaitake. Arā, i konei i whakareatia te maha o ngā pōtae ki te 30 nā te mea e \$30 te moni ka kohia e Hinewai mō ia pōtae.

E mōhio ana te ākongā ki te whārite taurangi hei whakaata i tētahi pūāhua whaitake. Arā, i konei, ka whakareatia te maha o ngā pōtae (p) ki te 3, nā te mea e \$3 te utu hei hoko mā Hinewai i ngā tāhei mō ia pōtae. Ka tangohia tērā i ngā moni ka kohia e ia, arā, te 30p.

E mōhio ana te ākongā ki te whārite taurangi hei whakaata i tētahi pūāhua whaitake. Arā, i konei ka tangohia te 50, nā te mea e \$50 te utu hei whakatū mā Hinewai i tana wāhi hoko pōtae i te māketē.

E mōhio ana te ākongā ki te whakamahi whārite hei whiriwhiri taurangi. Hei taurira:

$$\begin{aligned}
 U &= 30p - 3p - 50 \\
 &= (30 \times 5) - (3 \times 5) - 50 \\
 &= 150 - 15 - 50 \\
 &= 85 \text{ (e \$85 te hua moni a Hinewai)}
 \end{aligned}$$

E mōhio ana te ākongā ki te pānui kauwhata rautō. Arā, ko te 58.1cm te māhunga rahi rawa atu i inea e Hinewai.

e) E whakaaro ana a Hinewai ki te raranga i ētahi pōtae 12 hei hoko i te mākete ā te Rātapu e tū mai nei. Titiro ki te kauwhata, ka whakataua ai:

- E hia ngā **pōtae iti** me raranga e ia, e 51cm te roa, huri āmio i te pōtae.
- E hia ngā **pōtae waenga** me raranga e ia, e 54cm te roa, huri āmio i te pōtae.
- E hia ngā **pōtae nui** me raranga e ia, e 57cm te roa, huri āmio i te pōtae.

E mōhio ana te ākongā ki te whakamāori kauwhata rautō. Arā:

- O roto i ēnei māhunga 24, e 6 i nui ake i te 54cm. Nō reira e 3 ērā o roto i te 12 kia nui ake i te 54cm (arā ko te Pōtae Nui tērā = 57cm).
- O roto i ēnei māhunga 24, 16 i nui ake i te 51cm, engari i rite, i iti iho rānei i te 54cm. Nō reira e 8 ērā o roto i te 12 (arā, Pōtae Waenganui = 54cm).
- O roto i ēnei māhunga 24, e 2 i iti ake i te 51cm. Nō reira kotahi tērā o roto i te 12 (arā, Pōtae Iti = 51cm)

58	1								
57	3								
56									Pōtae Nui (57cm)
55	2	8							
54	0	0	2	8					
53	1	3	3	6	7	7			
52	4	5	7	8					Pōtae Waenganui (54cm)
51	2	6	6	9					
50	5	7							Pōtae Iti (51cm)