



He Rourou Huarākau

Te kaupapa: Te Hautau me te Ōrau

Te whenu: Te Tau me te Taurangi: Taumata 3–4

Hei whakamārama

He tauira ngohe tēnei, hei aromatawai i te mōhio o te ākonga ki te hautau me te ōrau. Mā te āta mātakitaki me te āta whakarongo a te pouako ki te mahi a te ākonga, e mōhiotia ai te taumata o te ākonga, ngā wāhi e pakari ana, me ngā wāhi hei whakapakari ake.

I ētahi wā, mā te whakawhitiwhiti kōrero, mā te paku whakamārama rānei a te pouako, e kite ai te ākonga i te rautaki, i te huarahi rānei hei whakaoti i te ngohe.

E tika ana kia taunga te ākonga ki tēnei mea te whakaoti rapanga, te wetewete i ngā kōrero me ngā tohutohu, te āta whakaaro i te rautaki e hāngai ana, me te tūhonohono anō i ngā maramara mātauranga kei roto i tōna hinengaro. Koirā te āhua o tēnei ngohe aromatawai.

Me tuku kia mahia tēnei ngohe aromatawai i muri i ngā akoranga e hāngai ana ki te hautau me te ōrau, kaua e tuku mātao noa iho.

Kei ēnei pukapuka ētahi kōrero hei āwhina i a koe:

- Te Pukapuka Tuarua o Te Poutama Tau **Te Uiui Aromatawai**. Ko ngā kōrero whānui e pā ana ki te aromatawai pāngarau.
- **Whanaketanga Pāngarau: He Aratohu mā te Pouako**. Ko ngā kōrero me ētahi tauira ngohe e hāngai ana ki ngā Whanaketanga Pāngarau.
- Te Pukapuka Tuawhitu o Te Poutama Tau **Te Hautau, te Tau ā-Ira me te Ōrau**. Ko ngā kōrero whānui e pā ana ki ngā huatau matua o te hautau.

Ngā tohutohu

Whakaaturia te kāri, ākene pea me pānui tahi me te ākonga, **kia mārama ai ngā kōrero**.

Hoatu he wā hei whakaoti mā te ākonga i ngā pātai.

Tonoa te ākonga kia whakamārama i āna mahi. Whakaahuangia ‘Te Whārangi Aromatawai mā te Pouako’, hei tuhi māu i āna whakamārama, me ō whakaaro, ō whakataunga aromatawai.

Āta tirohia ngā kōrero kei te whārangi ‘Hei Ārahi i te Aromatawai’ hei āwhina i a koe ki te whakatau i te taumata e hāngai ana ki ngā otinga a te ākonga. Kei tēnei whārangi te ngako o te pāngarau e hāngai ana ki tēnei ngohe, me ngā tauira whakamārama a ngā ākonga.

Me mātua mōhio te ākongā

- ki te whiriwhiri hautanga
- ki te whiriwhiri hautau rūnā
- ki te whiriwhiri ōrau o tētahi rahinga
- ki te tuhi kauwhata porowhita hei whakaatu hautanga
- ki ngā huringa hautanga: hautau noa ↔ ōrau ↔ hautau ā-ira
- ki ngā meka whakareatanga ki te 10 × 10 me ngā meka whakawehenga e whai pānga ana

Ngā kupu pāngarau e hāngai ana

hautau, kauwhata porowhita, ōrau

Ngā kupu e hāngai ana ki te horopaki

āporo, ārani, huarākau, netaṛini, panana, rourou

Ngā rauemi

- te kāri ngohe
- ētahi taonga ōkiko mēnā e hiahia ana (pērā i te porotiti)

Ētahi ngohe whakaako e hāngai ana

Te Poutama Tau: Pukapuka Tuawhā

- Hautanga Ōrite (wh.51)
- He Pāketē Rare (wh.60)
- Te Hautanga ā-Ira (wh.63)

Te Poutama Tau: Pukapuka Tuawhitu

- Pēke Kākano (wh.50)
- He Paipa ā-Ira (wh.61)
- Te Papa Hautanga ā-Ira (wh.67)
- Ringa Tītēre (wh.82)
- Ringa Tītēre Hikohiko (wh.98)

He tauira pātai hei kukume whakaaro

- Whakamāramahia ngā mahi i oti i a koe i tō hinengaro. He aha tō mahi tuatahi? He aha tō mahi tuarua?
- He aha koe i whiriwhiri ai i tēnā i te tuatahi?
- E mōhio ana koe ki tētahi atu rautaki e hāngai ana ki tēnā pātai?
- Me pēhea te whakatau tata i te wāhanga o te porowhita e hāngai ana ki tēnā hautau?
- Me pēhea te whiriwhiri i te ōrau e hāngai ana ki te huarākau kotahi?

Hei Ārahi i te Aromatawai

He Rourou Huarākau : Taumata 3-4

Te pātai	Kaupae 6 (Whanaketanga 3a/3e)	Kaupae 7 (Whanaketanga 4a)	Kaupae 8 (Whanaketanga 4a/4e)																																
1. He aha te ōrau o ngā āporo?	Ka hurihia te $\frac{1}{4}$ hei ōrau. Ka whakamahia tētahi rautaki wāwāhi tau hei tēpiri i ngā ōrau. Hei tauira: $25\% + 15\% + 20\% = (20 + 10 + 20) + (5 + 5) = 60$ Ka tangahia te tapeke o ngā ōrau i te 100% hei whiriwhiri i te ōrau o ngā āporo (arā, te 40%). 3e →																																		
2. E hia ngā panana?	Ka whakamahia tētahi rautaki wāwāhi tau hei whiriwhiri i te katoa o ngā huarākau. Hei tauira: $8 = 40\%, 40\% + 40\% + 20\% = 100\%$, nō reira, $8 + 8 + 4 = 20 = 100\%$ 3e → Ka whakamahia te haurua hei whiriwhiri i te hauwhā o te 20. Arā: $\frac{1}{2}$ o te $20 = 10, \frac{1}{2}$ o te $10 = 5$. Nō reira, ko te 5 te hauwhā o te 20, te maha o ngā panana. 3a →	Ka whakamahia te whakaaro pānga riterite hei whiriwhiri i te katoa o ngā huarākau. Hei tauira: $8 = 40\%$, nō reira, $2 \times 10 = 20 = 100\%$ 4a → Ka whakamahia te meka whakawehe hei whiriwhiri i te hauwhā o te 20. Arā: $20 \div 4 = 5$ (te maha o ngā panana) 4a →																																	
3. E hia ngā ārani?	Ka whakamahia te haurua tārua hei whiriwhiri i te 15%. Arā: $40\% = 8, 20\% = 4, 10\% = 2, 5\% = 1$, nō reira, $15\% = 3$. 3e →	Ka whakamahia te meka whakawehe hei whiriwhiri i te 15% o te 20. Hei tauira: $10\% \text{ o te } 20 = \frac{1}{10} \text{ o te } 20 = 20 \div 10 = 2$. Nō reira, $5\% = 1, 15\% = 3$. 4a →	Ka whakamahia te meka whakarea hei whiriwhiri i te 15% o te 20. Hei tauira: $15\% \text{ o te } 20 = 0.15 \times 20 = 3$ (nā te mea $1.5 \times 2 = 3$) 4e →																																
4. E hia ngā netaṛini?	Ka whakamahia te haurua hei whiriwhiri i te 20%. Arā: $40\% = 8$, nō reira, $20\% = 4$. 3e →	Ka whakamahia te meka whakawehe hei whiriwhiri i te 20% o te 20. Hei tauira: $10\% \text{ o te } 20 = \frac{1}{10} \text{ o te } 20 = 20 \div 10 = 2$. Nō reira, $20\% = 4$. 4a →																																	
5. Whakaaturia te ōrau o ia momo huarākau ki te kauwhata porowhita.	Ka rika te whakatau tata i te $\frac{1}{4}$, te 15%, te 20% me te 40% o tētahi porowhita hei whakaatu i ngā hautanga. Ka whakauru rānei i ngā hautanga ki te pātengi raranga rorohiko, me te whakaputa kauwhata porowhita. 3e →																																		
6. E 2 ngā panana, kotahi te netaṛini, e 2 ngā āporo ka kainga e ngā tamariki. He aha te ōrau āporo o roto i ngā huarākau e toe mai ana?			Ka whiriwhiria te maha o ia momo huarākau e toe ana: panana: $5 - 2 = 3$ ārani: $3 - 0 = 3$ netaṛini: $4 - 1 = 3$ āporo: $8 - 2 = 6$ katoa: $3 + 3 + 3 + 6 = 15$ Ka whakamahia te tauwehe pātahi hei whakamāmā i te $\frac{6}{15}$. Arā, $\frac{6 \div 3}{15 \div 3} = \frac{2}{5} = 40\%$ 4a →																																
7. E 20 katoa ngā huarākau kei roto i tētahi rourou, ā, he ōrite te maha o ia momo (panana, ārani, netaṛini, āporo). Mēnā ka kainga te 0.4 o ngā huarākau katoa, he aha ētahi whiriwhiringa mō te maha o ia momo huarākau e toe mai ana?		Ka whakamahia te hautau noa, te whakawehe me te whakarea hei whiriwhiri i te 0.4 o te 20. Hei tauira: $0.4 = \frac{4}{10}$, $\frac{1}{10} \text{ o te } 20 = 20 \div 10 = 2$, nō reira, $\frac{4}{10} = 2 \times 2 = 4$. 4a → Nō reira, 12 ngā huarākau e toe ana ($20 - 8$). Kāore e nui ake i te 5 o ia huarākau. Nō reira, ko ētahi whiriwhiringa mō te maha o ia momo: 5, 5, 2, 0 4, 4, 4, 0 3, 3, 3, 3 4a →	Ka whakamahia te meka whakarea hei whiriwhiri i te 60% o te 20. Hei tauira: $60\% \text{ o te } 20 = 0.6 \times 20 = 12$ (nā te mea $6 \times 2 = 12$) 4e → He nahanaha te whakaatu i ngā whiriwhiringa mō te maha o ia momo e toe ana. Hei tauira, ka whakaaturia ki te tūtahi: 4e → <table border="1"> <thead> <tr> <th>panana</th><th>ārani</th><th>netaṛini</th><th>āporo</th></tr> </thead> <tbody> <tr> <td>5</td><td>5</td><td>2</td><td>0</td></tr> <tr> <td>5</td><td>5</td><td>1</td><td>1</td></tr> <tr> <td>5</td><td>5</td><td>0</td><td>2</td></tr> <tr> <td>5</td><td>4</td><td>3</td><td>0</td></tr> <tr> <td>5</td><td>4</td><td>2</td><td>1</td></tr> <tr> <td>5</td><td>4</td><td>1</td><td>2</td></tr> <tr> <td>...</td><td></td><td></td><td></td></tr> </tbody> </table>	panana	ārani	netaṛini	āporo	5	5	2	0	5	5	1	1	5	5	0	2	5	4	3	0	5	4	2	1	5	4	1	2	...			
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Te Whārangi Aromatawai mā te Pouako

He Rourou Huarākau Taumata 3–4

Te pātai	Ngā aromatawai a te pouako
1. He aha te ōrau o ngā āporo?	
2. E hia ngā panana?	
3. E hia ngā ārani?	
4. E hia ngā netarīni?	
5. Whakaaturia te ōrau o ia momo huarākau ki te kauwhata porowhita.	
6. E 2 ngā panana, kotahi te netarīni, e 2 ngā āporo ka kainga e ngā tamariki. He aha te ōrau āporo o roto i ngā huarākau e toe mai ana?	
7. E 20 katoa ngā huarākau kei roto i tētahi rourou, ā, he ōrite te maha o ia momo (panana, ārani, netarīni, āporo). Mēnā ka kainga te 0.4 o ngā huarākau katoa, he aha ētahi whiriwhiringa mō te maha o ia momo huarākau e toe mai ana?	