

Te Whārangi Aromatawai mā te Pouako

He Rourou Huarākau

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?	

He Rourou Huarākau

Tūārere	1			2			3	
Tau	1	2	3	4	5	6	7	8

Tohu Ako: Te Tau, Ngā Tau Whakahau
Kaupapa: Te hautau me te ōrau

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.

Rauemi Tautoko:

Kei te whare whakaputu rauemi o Te Tāhuhu o te Mātauranga ēnei rauemi (Down the Back of the Chair), kei te whata rauemi tuihono hoki o Tāhūrangi.

- *Te Poutama Tau, Pukapuka Tuarua: Te Uiui Aromatawai.* Ko ngā kōrero whānui e pā ana ki te aromatawai pāngarau.
- *Te Poutama Tau, Pukapuka Tuawhitu: Te Hautau, te Tau ā-Ira me te Ōrau.* Ko ngā huatau matua me ētahi ngohe whakaako e hāngai ana ki 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. Tāruatia ‘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 mahi 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 ākonga

- 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, netarīni, panana, rourou

Ngā rauemi

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

Ētahi ngohe whakaako e hāngai ana

Te Poutama Tau: Pukapuka Tuawhā

- Hautanga Ōrite
- He Pāketete Rare
- Te Hautanga ā-Ira

Te Poutama Tau: Pukapuka Tuawhitu

- Pēke Kākano
- He Paipa ā-Ira
- Te Papa Hautanga ā-Ira
- Ringa Tītete
- Ringa Tītete Hikohiko

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

Te pātai	Kaupae 6 (Mahere Tau), Tau 6	Kaupae 7 (Mahere Tau), Tau 7	Kaupae 8 (Mahere Tau), Tau 8																																
1. He aha te ōrau o ngā āporo?	Ka hurihia te $\frac{1}{4}$ hei ōrau. Ka whakamahia tētahi rautaki wāwāhi tau hei tāpiri i ngā ōrau. Hei tauira: $25\% + 15\% + 20\% = (20 + 10 + 20) + (5 + 5) = 60$ Ka tangohia te tapeke o ngā ōrau i te 100% hei whiriwhiri i te ōrau o ngā āporo (arā, te 40%).																																		
2. E hia ngā panana?	Ka whakamahia tēahi rautaki wāwāhi tau hei whiriwhiri i te katoa o ngā huarākau. Hei tauira: $8 = 40\%, 40\% + 40\% + 20\% = 100\%,$ nō reira, $8 + 8 + 4 = 20 = 100\%$ 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.	Ka whakamahia te whakaaro pānga riterite hei whiriwhiri i te katoa o ngā huarākau. Hei tauira: $8 = 40\%,$ nō reira, $2 = 10\%, 2 \times 10 = 20 = 100\%$ Ka whakamchia te meka whakawehe hei whiriwhiri i te hauwhā o te 20. Arā: $20 \div 4 = 5$ (te maha o ngā panana)																																	
3. E hia ngā ārani?	Ka whakamahia te haurua tāruarua hei whiriwhiri i te 15%. Arā: $40\% = 8, 20\% = 4, 10\% = 2, 5\% = 1,$ nō reira, $15\% = 3.$	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, $5\% = 1, 15\% = 3.$	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 $1.5 \times 2 = 3$)																																
4. E hia ngā netarīni?	Ka whakamahia te haurua hei whiriwhiri i te 20%. Arā: $40\% = 8,$ nō reira, $20\% = 4.$	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, $20\% = 4.$																																	
5. Whakaaturia te ōrau o ia momo huarākau ki te kauwhata porowhita.	Ka tika 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.																																		
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?			Ka whiriwhiria te maha o ia momo huarākau e toe ana: panana: $5 - 2 = 3$ ārani: $3 - 0 = 3$ netarīni: $4 - 1 = 3$ āporo: $8 - 2 = 6$ katoa: $3 + 3 + 6 = 15$ Ka whakamahia te tauwehe pātahi hei whakamāmā i te $\frac{6}{15}$. Arā, $\frac{6 \div 3}{15 \div 3} = \frac{2}{5} = 40\%$																																
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?		Ka whakamahia te hautau noa, te whakawehe me te whakarea hei whiriwhiri i te 0.4 o te 20. Hei tauira: $0.4 = \frac{4}{10}.$ $\frac{1}{10}$ o te 20 = 2, nō reira, $\frac{4}{10} = 2 \times 4 = 8.$ 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	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 $6 \times 2 = 12$) He nahanaha te whakaatu i ngā whiriwhiringa mō te maha o ia momo e toe ana. Hei tauira, ka whakaaturia ki te tūtohi: <table><tr><td>panana</td><td>ārani</td><td>netarīni</td><td>āporo</td></tr><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></table>	panana	ārani	netarīni	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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