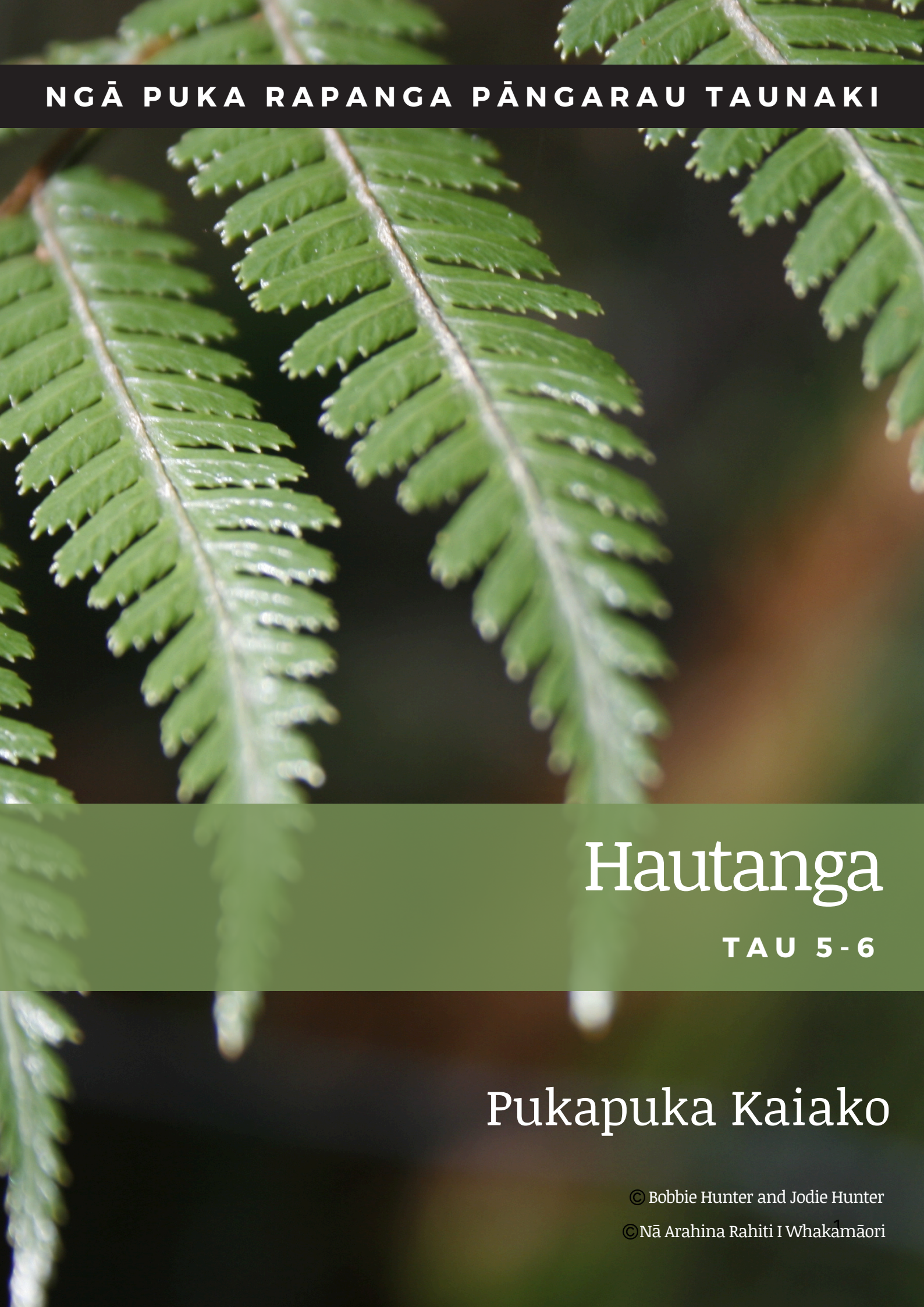




NGĀ PUKA RAPANGA PĀNGARAU TAUNAKI

Hautanga

TAU 5-6

Pukapuka Kaiako

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Tūmahi 1

Whakamahia ngā tāpa hautanga hei hanga i tētahi i runga i ngā huarahi rerekē. Hopukina ō urupare.

[Whakaotia te wāhanga tuatahi o te tūhono i raro nei i muri i tēnei wāhanga o te akoranga].

Whakamahia ngā tāpa hautanga hei hanga i ngā tau hautanga rerekē, neke atu i te kotahi katoa, engari iti iho i te kotahi me te hawhe. Hopukina ō urupare.

Whakamahia ngā tāpa hautanga hei hanga i ngā tau hautanga rerekē, neke atu i te kotahi katoa, engari iti iho i te kotahi me te hawhe. Hopukina ō urupare.

Whakamahia ngā tāpa hautanga hei hanga i ngā tau hautanga rerekē, iti iho i te toru hauwhā, engari neke atu i te kotahi whakatekau. Hopukina ō urupare.

Whakamahia ngā tāpa hautanga hei hanga i ngā tau hautanga rerekē, iti iho i te rua hautoru engari neke atu i te kotahi waru. Hopukina ō urupare.

Hei āwhina i te kaiako

I mua i te whakarewatanga, me tūhura ngā ākonga me te kōrero tahi mō ngā wāhanga hautanga mō te katoa, haurua, hauwhā, waru, tuatoru, tuaono, tekau mā rua. Mahia ia tūmahi me te matapaki i mua i te neke ki te tūmahi panuku

Whakawāteatia ngā wāhanga hautanga mō te tūmahi.

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu tau hautanga (ehara i te wāhanga, i te moka rānei) me te nui ake i te, iti iho i te, ōrite ki te.

Kia mōhio ki ngā ākonga e whakawhānui ana (hei tauira, ko te iti ake o te tautau, ko te nui ake o te hautanga ina kotahi te tau). Tuhia ēnei hei whakaaro akomanga, ā, tonoa ngā ākonga kia tūhura me te whakamatau ā muri ake nei hei ngohe whakamahana.

Tūmanako kia tohu ngā ākonga i ngā rauemi me te whakamahi i te tuhipoka tika me te tohu ōrite ($\frac{2}{2} = 1$)

Mō te tūmahi takitahi, me wātea ngā tāpa hautanga mō ngā ākonga e hiahia ana ki te whakamahi.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Wā toha

Tīpakohia ngā ākonga ki te tiritiri nā wai i hanga ngā pahekotanga o te katoa, o ētahi atu hautanga rānei mā te whakamahi i ngā wāhanga rahi ōrite (hei tauira, haurua, hauwhā, waru) me te tuhi i ngā pahekotanga hei tau, whārite, kupu rānei. Kātahi, tīpakohia ngā ākonga ki te tiritiri nā wai i mahi pahekotanga o te katoa mā te whakamahi i ngā wāhanga hautanga rerekē (hei tauira, $\frac{1}{2} + \frac{1}{4} + \frac{1}{4} = 1$) me te whakapūkete i ngā pahekotanga hei tau, whārite, kupu rānei.

Hono

He aha tāu e kite ai mō ngā hautanga iti iho i te kotahi katoa?
He aha tāu e kite ai mō ngā hautanga neke atu i te kotahi katoa?

He aha te hautau ōrite ki $\frac{6}{4}$?

He aha te hautau ōrite ki $\frac{75}{50}$?

He aha te hautau ōrite ki $\frac{1500}{1000}$?

He aha ngā tauira me ngā pātahitanga e kitea ana e koe?

He aha ētahi atu hautanga e ōrite ana ki te kotahi katoa me te hawhe?
[Whakahaua ngā ākonga kia hopu mā te tohu ōrite $\frac{6}{4} = \frac{75}{50} = \frac{1500}{1000}$

He aha te ture mō ngā hautanga e ōrite ana ki te kotahi katoa me te hawhe?

[Tuhia ngā whakaaro me te tohu hei $\frac{n + (n+2)}{n}$]

Whainga Ako: Ka ako ngā mokopuna ki te:

Whakakotahitia me te whakakotahi anō i ngā wae hautanga rerekē kia kotahi te katoa.

Tautohu me te hanga hautanga ōrite.

Āhukahuka me te whakamahi i ngā hautanga hē hei tohu neke atu i te kotahi katoa

Marautanga

Tau 5

Āhukahuka te pānui, te tuhi me te waihanga i ngā hautekau, i ngā haurau hei hautau, hei hautanga ā-ira hoki.

Whakatairite me te whakaraupapa i ngā hautau hautekau, i ngā hautau haurau, i ngā hautanga ā-ira hautekau, i ngā hautanga ā-ira haurau hoki.

Tau 6

Āhukahuka te pānui, te tuhi me te waihanga hautau, hautanga ā-mati (kia rua mati ā-ira), ōrau hoki.

Whakatairite me te raupapa i ngā hautau, hautanga ā-mati (kia rua mati ā-ira), ōrau hoki

Huri i te hautanga ā-ira, te ōrau hoki hei hautau.

Reo Pāngarau

Katoa, haurua, hauwhā, hauru, hauono, hautekau, hautekau mā rua, hauwaru, hautanga, tau hautanga, tau oti, ōrite, nui ake i te, iti iho i te.

Ngā Tūmahi Takitahi

He aha ētahi atu hautanga e ōrite ana ki te kotahi?

Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhi, ngā whārite).

He aha ētahi atu hautanga e ōrite ana ki te haurua?

Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhi, ngā whārite).

He aha ētahi atu hautanga e ōrite ana ki te haurima?

Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhi, ngā whārite).

He aha ētahi atu hautanga e ōrite ana ki te hatoru?

Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhi, ngā whārite).

He aha ētahi atu hautanga e ōrite ana ki ngā rua hauwaru?

Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhi, ngā whārite).

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 2

Kei te tākaro a Tiani me ōna hoa i tētahi kēmu me kōrero pono, hē rānei ki ia kōrero.

E kī ana a Tiani neke atu i te 15 ngā tau i waenganui i te 1 me te 2. E kī ana ōna hoa he hē taua kōrero, engari kei te hē rātau.

Ka taea e koe te whakamatau he nui ake i te 15 ngā tau i waenganui i te 1 me te 2. Whakamahia he raina-tau hei whakaatu kei hea ō tau.

Hei āwhina i te kaiako

I mua i tō whakarewatanga i te tūmahi, hoatu ki ngā ākonga he tāpa hautanga me te tono kia whakaoti i ngā tūmahi e whai ake nei:

- Whakamahia ngā tāpa hautanga hei hanga i ngā tau hautanga rerekē e ōrite ana ki te ono waruwaru.
- Whakamahia ngā tāpa hautanga hei hanga i ngā tau hautanga rerekē, neke atu i te whitu waru, iti iho i te kotahi me te hauwhā.

Me whai rau pepa nunui me ngā pene hei tā i ā rātou raina tau.

Whakangāwari i ngā ākonga kia kite i te tīmatanga o te tau, kei roto anake i ngā rārangi tau i whakamahia e rātou ngā tau katoa (ngā tau i hua mai i te tataunga). Ka taea te whakaatu i ngā hautanga e kōrerotia ana e rātou ināianei (ngā tau i hua mai i te ritua ōrite, te wātaki rānei) ki te raina tau. E whakaatu ana tēnei ka whakaarohia hoki ngā hautanga hei tau. I roto i te tūhononga tohua ngā hautanga (hei tauira, $3\frac{1}{2}$) hei tau whakaranu.

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu e whakawhāiti ana i te wehewehe, i te wehe rānei i te wehenga ōrite ki ngā wāhanga ōrite.

Kia mōhio ki ngā ākonga e kite ana i te ariā o ngā hautanga hei tau i waenga i ngā tau e tautohe ana. Tukua rātou ki te uaua me te hanga whakaaro mā te kōrero pāngarau me te whakamahi i te whakaae pāngarau me te whakahē pāngarau (hei tauira, e whakaae ana ahau nā te mea...).

Mō te tūmahi takitahi, hoatu ki ngā ākonga ngā tāpa hautanga

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina-tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

He maha ngā hautanga mutunga kore i waenga i ngā hautanga e rua i te raina tau.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai e āhei ana ki te kite me te tā i tētahi raina-tau me te tohu i ngā tūnga hautanga i waenga i te 1 me te 2 mā te whakawehe i te raina-tau

Hono

He aha ngā tau whāranu kei waenganui i te 9 me te 10?

Tohua ia ki tētahi raina-tau hei whakaatu kei hea rātou.

Whainga Ako: Ka ako ngā mokopuna ki te:

Whakapūketetia ngā hautanga ki tētahi raina-tau.

Kia mōhio koe he maha mutunga kore o ngā hautanga i waenga i ngā tau oti e rua, i ngā hautanga rānei e rua i runga i te raina tau.

Ngā Tūmahi Takitahi

Whakamahia ngā tāpa hautanga hei tūhura i ngā pātai e whai ake nei:

He rite tonu te $\frac{6}{10}$ rīpene ki te $\frac{3}{5}$ rīpene?
He aha ai, he aha i kore ai rānei?

He rite tonu te $\frac{4}{6}$ rīpene ki te $\frac{3}{5}$ rīpene?
He aha ai, he aha i kore ai rānei?

He rite tonu te $\frac{1}{4}$ rīpene ki tētahi rīpene $\frac{2}{8}$, $\frac{4}{16}$, $\frac{5}{20}$ rānei?
He aha ai, he aha i kore ai rānei?

He nui ake te $\frac{7}{8}$ rīpene i te $\frac{5}{6}$ rīpene?
He aha ai, he aha i kore ai rānei?

He nui ake te 1 rīpene i te $\frac{1}{4} + \frac{2}{2}$ o te rīpene?
He aha ai, he aha i kore ai rānei?

Marautanga

Tau 5

Āhukahuka te pānui, te tuhi me te waihanga i ngā hautekau, i ngā haurau hei hautau, hei hautanga ā-ira hoki.

Whakatairite me te whakaraupapa i ngā hautau hautekau, i ngā hautau haurau, i ngā hautanga ā-ira hautekau, i ngā hautanga ā-ira haurau hoki.

Tau 6

Āhukahuka te pānui, te tuhi me te waihanga hautau, hautanga ā-mati (kia rua mati ā-ira), ōrau hoki.

Whakatairite me te raupapa i ngā hautau, hautanga ā-mati (kia rua mati ā-ira), ōrau hoki

Huri i te hautanga ā-ira, te ōrau hoki hei hautau.

Reo Pāngarau

Katoa, haurua, hauwhā, hatoru, hauono, hautekau mā rua, hauwaru, hautanga, tau oti, ōrite, nui ake i te, iti iho i te, taurunga, tauraro.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 3

Ko wai i kai nui ake? Ko wai e iti ake te kai?

1. E waru ngā tamariki e tiritiri ana i ngā keke e 9 kia ōrite.
2. Tokorima ngā tamariki e tiritiri ana i ngā keke e 7 kia ōrite.
3. Tokowhā ngā tamariki e tiritiri ana i ngā keke e 6 kia ōrite.
4. Tokowhitu ngā tamariki e tiritiri ana i ngā keke 10 kia ōrite.
5. Tokotoru ngā tamariki e tiritiri ana i ngā keke e 4 kia ōrite.
6. E iwa ngā tamariki e tiritiri ana i ngā keke 15 kia ōrite.

Whakaraupapatia mai i te iti rawa ki te nui rawa. Kia rite ki te whakamārama me te whakatika i ō whakaaro i roto i ngā huarahi maha.

Hei āwhina i te kaiako

Kia mōhio ki ngā ākonga e whakamahi ana i te whakaaro whakarea me te whakaaro whanaungatanga hei wāhanga o tā rātou whakamārama

(hei tauira, $\frac{9}{8}$ and $\frac{9}{8} = 1\frac{1}{8}$).

Tūmanako kia whakamahi ngā ākonga i ngā momo whakaaturanga tae atu ki ngā tātuihi me te tuhipoka.

Wā toha

Tīpakohia ngā ākonga ki te tiritiri ko wai e whakawhanake ana i ngā whakaaturanga hei whakatika i ā rātou whakaaro, ā, ka wehe i ngā keke katoa ki ngā rahinga hautanga, tiritiri rānei hei rahinga hautanga me te hautanga. Ki te kore e whakamahia te rongoā tuarua, whakatauiria hei huarahi anō kua kitea e te kaiako e whakamahia ana i mua.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuetanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Hono

Tāhopu i ngā whārite ōrite mō ia raruraru me te whakatauiria i ngā take tuatahi e rua, kātahi ka tono ki ngā ākonga kia whakaoti i te toenga.

$$9 \div 8 = \frac{9}{8} = 1 \frac{1}{8}$$

$$7 \div 5 = \frac{7}{5} = 1 \frac{2}{5}$$

$$6 \div 4 =$$

$$8 \div 6 =$$

$$4 \div 3 =$$

$$14 \div 10 =$$

He aha ngā tauira me ngā pātahitanga e kitea ana e koe hei āwhina i a koe ki te whakatika i ngā rapanga?

Whainga Ako: Ka ako ngā mokopuna ki te:

Divide a whole number into fractions.

Compare and use different sized fractions.

Recognise and use improper fractions to represent more than one whole.

Ngā Tūmahi Takitahi

Ko wai e inu ana i te nuīnga o ngā inu? Ko wai e iti iho ana te inu?

1. Tokoono ngā tamariki e tiritiri ana i ngā tīni inu e 8.
2. Tekau ngā tamariki e tiritiri ana i ngā kēne inu e 11 ōrite.
3. Tokowhā ngā tamariki e tiritiri ana i ngā kēne inu e 6.
4. Tokotoru ngā tamariki e tiritiri ana i ngā kēne inu e 4.
5. E iwa ngā tamariki e tiritiri ōrite ana i ngā kēne inu e 11.
6. E waru ngā tamariki e tiritiri ōrite ana i ngā tīni inu e 10.
- 7.

Whakaraupapatia aua mea, ā, kia rite ki te whakamārama i roto i ngā huarahi maha.

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:
h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Katoa, hauwhā, tuawhā,
hatoru, hauono,
hautekau mā rua,
hauwaru, huiwa,
hautekau mā rima,
hautanga, ōrite, tau
whakaranu, nui ake i te,
iti iho i te, taurunga,
tauraro.*

Tūmahi 4

E ngana ana te tīma netipōro a Sisilia ki te mahi ko ēhea ngā kaitākaro hei whakaeke whāinga me te pūtiro whāinga. Ka titiro rātau ki ngā hua mai i te mahi tuatahi:

Mō ia 8 tākainga i tangohia e ia, e toru ngā whāinga i piro ai a Marieta.
Mo ia tākainga e 4 i tangohia e ia, e rua ngā whāinga i piro ai a Jirah.
Mō ia 6 tākainga i tangohia e ia, e whā ngā whāinga i piro ai a Valerie.
Mo ia tākainga e 3 i tangohia e ia, kotahi te piro i piro ai a Hemi.
Mō ia 12 tākainga i tangohia e ia, e whitu ngā whāinga i piro ai a Aroha.

I runga anō i ēnei hua, ko ēhea ngā kaitākaro me tīpako mō ēnei tūnga?
Kia rite ki te whakamārama me te whakatika i ō whakaaro i roto i ngā huarahi maha.

Hei āwhina i te kaiako

Hoatu ki ngā ākonga he tāpa hautanga ina hiahiatia. Ka taea hoki ēnei te whakamahi hei whakatauiria me pēhea te kimi hautanga ōrite me te whakaatu i ngā pātahitanga.

Aroturuki mō ngā ākonga e whakamahi ana i ngā kupu ōrite me te whakaaro whanaungatanga. Ka kite pea ngā ākonga kia tika te whakataurite i ngā hautau, me ōrite ngā tautapa.

Tūmanako kia whakaatu ngā ākonga mā te tuhi me ngā tātuhī hei whakatika i ngā ōritetanga.

Wā toha

Tīpakohia ngā ākonga ki te tiritiri nā wai i tahuri hautanga ki ngā hautanga ōrite mā te whakamahi i ngā tikanga ōpaki me ngā whakaaturanga i mua i te whakataurite i ngā hautau. Mēnā i hurihia e ētahi ākonga ngā hautanga katoa ki tētahi tautapa noa i te tīpako kia tiritiri whakamutunga.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Hono

Ko tēhea te mea nui ake?

$\frac{3}{5}$, $\frac{7}{10}$ rānei

$\frac{2}{3}$, $\frac{5}{6}$, $\frac{8}{12}$ rānei

He aha ngā tauira me ngā pātahitanga i whakamahia e koe hei kimi hautanga ōrite hei whakataurite i aua mea?

Ka taea e koe te whakatakoto i tētahi ture hei huri i ngā hautanga engari kia ōrite tonu?

Whainga Ako: Ka ako ngā mokopuna ki te:

Tohu hautau.

Whakataurite me te raupapa hautau.

Kimihia ngā hautanga ōrite.

Ngā Tūmahi Takitahi

Ko wai e inu ana i ētahi atu mea? Ko wai e iti iho ana te inu?

1. Tokoono ngā tamariki e tiritiri ana i ngā tīni inu e 8.
2. Tekau ngā tamariki e tiritiri ana i ngā kēne inu e 11 ōrite.
3. Tokowhā ngā tamariki e tiritiri ana i ngā kēne inu e 6.
4. Tokotoru ngā tamariki e tiritiri ana i ngā kēne inu e 4.
5. E iwa ngā tamariki e tiritiri ōrite ana i ngā kēne inu e 11.
6. E waru ngā tamariki e tiritiri ōrite ana i ngā tīni inu e 10.

Whakaraupapatia aua mea, ā, kia rite ki te whakamārama i roto i ngā huarahi maha.

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:
h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Katoa, hauwhā,
hatoru, hauono,
hautekau mā rua,
hautekau mā rima,
hauiva, hautanga,
ōrite, tau whakaranu,
nui ake i te, iti iho i te,
taurunga, tauraro.*

Tūmahi 5

E hiahia ana a Hōria me ōna hoa tokorua ki te tākaro tīpoka. Hei mahi i tēnei, me hono tahi rātau i a rātau taura iti ake.

Kotahi $\frac{3}{4}$ mita te taura o Hōria.

Kotahi $\frac{2}{3}$ mita te taura o Lily.

Kotahi $\frac{1}{2}$ mita te taura o Tasi.

Kia honoa ngā wāhanga katoa, pēhea te roa o te taura?

Hei āwhina i te kaiako

Whakangāwari i ngā ākonga kia mōhio kia ōrite ngā hautanga

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu ōrite me te whakaaro whanaungatanga

Kia mōhio ki ngā ākonga e whakaatu ana i te māramatanga whanaungatanga ($\frac{3}{4}$ hei $\frac{1}{2} + \frac{1}{4}$ e whakamahi ana rānei i ngā pātahitanga ōrite).

Tūmanakohia kia whakaatu ngā ākonga mā te whakamahi i ngā tātuhī me te tuhipoka.

Wā toha

Tīpakohia ngā ākonga hei tiritiri nā wai i tahuri hautanga ki ngā hautanga ōrite mā te whakamahi i ngā tikanga ōpaki, ōkawa ake rānei (whakareatanga hei tauira) i mua i te tāpiritanga o ngā hautau.

Hono

He aha te mea noa iho mēnā e tāpiri ana koe:

$\frac{1}{2}$ me $\frac{1}{4}$

$\frac{1}{3}$ me $\frac{1}{6}$

$\frac{1}{3}$ me $\frac{1}{4}$

$\frac{1}{2}$ me $\frac{1}{5}$

$\frac{3}{4}$ me $\frac{1}{5}$

$\frac{7}{8}$ me $\frac{1}{3}$

Ka kitea e koe he tauira mō te kimi i tētahi tautapa noa?

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaatu i ia hautanga/ōwehenga e tētahi huinga mutunga kore o ngā hautanga/ōwehenga rerekē engari ōrite.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Ko ngā hautanga kāore i te rite ki ngā tautapa ka whakaingoa anōtia hei hautanga ōrite me ngā tautapa ōrite hei tāpiri me te tango.

Whaingā Ako: Ka ako ngā mokopuna ki te:

Hurīhia ngā hautanga ki ngā hautanga ōrite.

Whakaotia ngā raru e pā ana ki te tāpiri hautanga.

Ngā Tūmahī Takitahi

Kai nga whitiāhua a Litea me ōna hoa tokorua. Ka hokona e rātau he pēke kānga pahū nui.

E kai ana a Litea $\frac{3}{8}$ i tana pēke.

E kai ana a Kaia $\frac{2}{4}$ i tana pēke.

E kai ana a Gaylene $\frac{10}{12}$ i tana pēke.

Ka whiua e rātau ngā kānga pahū katoa e toe ana ki roto i ngā pēke e rua. E hia te nui e toe ana hei mau ki te kāinga?

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:

h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Katoa, hauwhā,
hatoru, hauono, ōrite,
taurunga, tauraro.*

Tūmahi 6

Kei te hanga a Hōne me ōna hoa i ētahi whakakai. E 3 ō rātou pōkai uku.

Ka whakamahia e Hēnare he $\frac{2}{3}$ pōkai uku.

Ka whakamahia e Tupou he $\frac{3}{4}$ pōkai uku.

Ka whakamahia e Claire he $\frac{5}{8}$ pōkai uku.

Ka whakamahia e Jean te toenga.

E hia te nui o te mahi a Jean i tana meka?

Hei āwhina i te kaiako

Whakangāwari i ngā ākonga kia mōhio kia ōrite ngā hautanga

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu ōrite me te whakaaro whanaungatanga

Kia mōhio ki ngā ākonga e whakaatu ana i te māramatanga whanaungatanga ($\frac{3}{4}$ hei $\frac{1}{2} + \frac{1}{4}$ e whakamahi ana rānei i ngā pātahitanga ōrite).

Tūmanakohia kia whakaatu ngā ākonga mā te whakamahi i ngā tātuhi me te tuhipoka.

Wā toha

Tīpakohia ngā ākonga hei tiritiri nā wai i tahuri hautanga ki ngā hautanga ōrite mā te whakamahi i ngā tikanga ōpaki me ngā whakaaturanga, aratuka ōkawa rānei i mua i te tāpiritanga o ngā hautanga.

Hono

He aha ngā tauraro noa i waenga i ēnei tau:

$$\frac{1}{8} \quad \frac{1}{2} \quad \frac{1}{16}$$

$$\frac{1}{4} \quad \frac{1}{5} \quad \frac{1}{6}$$

Ka kitea e koe he tauira?

He aha te ture ka taea e koe te whakamahi hei kimi i ngā tauraro noa?

Ngā Whakaaro Matua o te Ao

He maha ngā āhukatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaatu i ia hautanga/ōwehenga e tētahi huinga mutunga kore o ngā hautanga/ōwehenga rerekē engari ōrite.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Ko ngā hautanga kāore i te rite ki ngā tautapa ka whakaingoatia anōtia hei hautanga ōrite me ngā tautapa ōrite hei tāpiri me te tango.

Whainga Ako: Ka ako ngā mokopuna ki te:

Kimihia ngā hautanga ōrite.

Tangohia tētahi hautanga mai i te tau oti.

Tāpirihia me te tango hautau.

Whakawhānuitia me pēhea te kimi i ngā tautapa noa.

Ngā Tūmahi Takitahi

Kimihia ngā rongoā.

He pēke māpere $\frac{1}{6}$ tā Hera. He pēke māpere $\frac{1}{12}$ tā Lily.
E hia te nui o te pēke māpere kei a rātou?

He pēke māpere $\frac{1}{5}$ tā Hera. He pēke māpere $\frac{1}{10}$ tā Lily.
E hia te nui o te pēke māpere kei a rātou?

He pēke māpere $\frac{1}{6}$ tā Hera. He pēke māpere $\frac{1}{4}$ tā Lily.
E hia te nui o te pēke māpere kei a rātou?

He pēke māpere $\frac{1}{3}$ tā Hera. He pēke māpere $\frac{1}{7}$ tā Lily.
E hia te nui o te pēke māpere kei a rātou?

He pēke māpere $\frac{2}{3}$ tā Hera. He pēke māpere $\frac{1}{9}$ tā Lily.
E hia te nui o te pēke māpere kei a rātou?

He pēke māpere $\frac{4}{6}$ tā Hera. He pēke māpere $\frac{1}{5}$ tā Lily.
E hia te nui o te pēke māpere kei a rātou?

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:

h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Katoa, haurua, hauwhā,
tuawhā, hātoru, ōrite,
tau whakaranu,
taurunga, tauraro.*

Tūmahi 7

Kei te mahi tivaevae nga whaea o Tere.

Mō ia wāhanga o te frangipani ka whakamahia e Aunty Tarai te $\frac{3}{4}$ miro whero.

Ka whakamahia e Aunty Teremoana te $\frac{1}{5}$ miro whero.

E hia anō te miro e whakamahia ana e Aunty Tarai?

Kei te mahi tivaevae nga whaea o Tere. Ka whakamahia e Aunty Tarai te $\frac{8}{10}$ miro whero.

Ka whakamahia e Aunty Teremoana te $\frac{2}{4}$ miro whero.

E hia anō te miro e whakamahia ana e Aunty Tarai?

Kei te mahi tivaevae nga whaea o Tere. Ka whakamahia e Aunty Tarai te $\frac{10}{12}$ miro whero.

E whakamahi ana a Aunty Teremoana i te $\frac{6}{8}$ miro whero.

E hia anō te miro e whakamahia ana e Aunty Tarai?

Hei āwhina i te kaiako

Me whakawātea ngā tīhore hautanga me ngā raina-tau.

Whakangāwari i ngā ākonga kia kite i te tango hautanga me kimi rātou i tētahi tautapa noa.

Aroturuki mō ngā ākonga e whakamahi ana i ngā kupu ōrite me te whakaaro whanaungatanga.

Wā toha

Tīpakohia ngā ākonga hei tiritiri nā wai i tahuri hautanga ki ngā hautanga ōrite mā te whakamahi i ngā tikanga ōpaki, ōkawa ake rānei (whakareatanga hei tauira) i mua i te tango i ngā hautanga.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite. Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaatu i ia hautanga/ōwehenga e tētahi huinga mutunga kore o ngā hautanga/ōwehenga rerekē engari ōrite.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Ko ngā hautanga kāore i te rite ki ngā tautapa ka whakaingoaatia anōtia hei hautanga ōrite me ngā tautapa ōrite hei tāpiri me te tango.

Ka taea te whakaingoa i ngā kianga tau i roto i te maha o ngā huarahi rerekē, engari ōrite (hei tauira, $\frac{4}{6} \div \frac{2}{8} = \frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{1}{4}$; $26 \times 4 = (20 + 6) \times 4$). 21

Hono

He aha te rerekētanga i waenganui:

$$\frac{1}{3} \text{ me } \frac{4}{6}$$

$$\frac{4}{6} \text{ me } \frac{10}{12}$$

$$\frac{3}{8} \text{ me } \frac{4}{4}$$

$$\frac{1}{7} \text{ me } \frac{1}{4}$$

$$\frac{1}{3} \text{ me } \frac{1}{4}$$

$$\frac{1}{5} \text{ me } \frac{1}{6}$$

He aha ngā tauira i whakamahia e koe hei whakaoti i ēnei i roto i tō hinengaro?

Whainga Ako: Ka ako ngā mokopuna ki te:

Kimihia ngā hautanga ōrite.

Tangohia te hautanga mai i te hautanga.

Whakawhānuitia me pēhea te kimi hautanga ōrite.

Ngā Tūmahi Takitahi

$$\frac{1}{2} - \frac{1}{4} =$$

$$\frac{1}{3} - \frac{1}{4} =$$

$$\frac{5}{6} - \frac{1}{2} =$$

$$? - \frac{1}{4} = \frac{1}{8}$$

$$? - \frac{2}{5} = \frac{3}{5}$$

$$\frac{9}{10} - ? = \frac{1}{2}$$

$$\frac{5}{8} - ? = \frac{1}{4}$$

$$\frac{6}{9} = \frac{1}{2} + ?$$

$$\frac{3}{5} = ? + \frac{1}{10}$$

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:

h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Katoa, haurua, hauwhā,
tuawhā, hātoru,
hauono, ōrite, tau
whakaranu, taurunga,
tauraro.*

Tūmahi 8

E āwhina ana a Alani rāua ko Erihapeti i to rāua Māmā ki te hanga i te palusami (he mīti kau, he rau pakiaka taro me te rihi kokonati) mo te hapa. Ka whāngaia e ia wāhanga ngā tāngata tokowhā. Mō ia wāhanga o te palusami ka whakamahia e rātou:

- $\frac{1}{2}$ kēne mīti kau
- $\frac{7}{8}$ o te pēke kākahu hou
- $\frac{2}{3}$ riki nohinohi
- $\frac{1}{4}$ tīpune tote
- $\frac{3}{4}$ kapu wai
- $\frac{4}{5}$ kēne kirīmi kokonati

E 12 ngā tāngata e hapa ana. E hia te nui o ia mea e hiahiatia ana e rātou?

Hei āwhina i te kaiako

I te wā o te whakarewatanga, whakatauria te horopaki o te raruraru. He rihi noa iho te Palusami ki Te Moana-nui-a-Kiwa.

Whakangāwari i ngā ākonga kia kite he taurea o te tau hautanga ka taea e rātou te tāpiri, te whakarea rānei.

Kia mōhio ki ngā ākonga e whakamahi ana i te whakaaro whakarea. Tirohia hoki, ā, tukua ngā ākonga kia uaua ki te mātāpono ātete o te whakarea i tētahi tau oti ki tētahi tau hautanga e iti ake ai te hua, kaua e nui ake.

Me wātea he rauemi raima mēnā e hiahiatia ana hei tīpako mā ngā ākonga (hei tauira, ngā tāpa hautanga).

Tūmanakohia kia whakaaturia e ngā ākonga mā te whakamahi i ngā tātuhī, i ngā raina-tau, i ngā wāhanga hautanga rānei hei tohu i ngā wāhanga o te katoa me te whakamārama mā te tuhipoka.

Wā toha

Tīpakohia ngā ākonga e whakamahi ana i te tāpiritanga tukurua mō ngā tau hautanga (hei tauira, tāpirihia $\frac{7}{8}$ kia toru ngā wā mō te kēne $2\frac{1}{8}$ mīti kau kānga ka whiwhi); tāpirihia rānei ngā tuatoru me te whiwhi i ngā tuatoru e ono, ā, ka kite i tēnei e ōrite ana ki ngā katoa e rua; whakaoti rānei i te raru hei $3 \times \frac{7}{8} = \frac{21}{8}$, $2\frac{5}{8}$ rānei. Ki te kore e whakamahia te rongoā whakarea tuarua, whakatauiria hei huarahi anō kua kitea e te kaiako e whakamahia ana i mua.

Ngā Whakaaro Matua o te Ao

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b ≠ 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaatu i ia hautanga/ōwehenga e tētahi huinga mutunga kore o ngā hautanga/ōwehenga rerekē engari ōrite.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Ka taea te whakaingoa i ngā kīanga tau i roto i te maha o ngā huarahi rerekē, engari ōrite (hei tauira,

$$\frac{4}{6} \div \frac{2}{8} = \frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{1}{4};$$

$$26 \times 4 = (20 + 6) \times 4).$$

Hono

$$\frac{1}{2} \times 4 =$$

$$\frac{1}{2} \times 8 =$$

$$\frac{1}{4} \times 8 =$$

$$\frac{1}{4} \times 20 =$$

$$\frac{1}{3} \times 6 =$$

$$\frac{1}{10} \times 50 =$$

He aha ngā tauira ka kitea e koe ina whakarea koe i ngā hautau?

Whaingā Ako: Ka ako ngā mokopuna ki te:

Whakareatia te tau whāranu ki te tau oti.

Whakareatia te hautanga ki te tau oti.

Ngā Tūmahi Takitahi

E āwhina ana a Alani rāua ko Erihapeti i to rāua Māmā ki te hanga i te palusami (he mīti kau, he rau pakiaka taro me te rihi kokonati) mo te hapa.

Mō ia wāhanga o te palusami ka whakamahia e rātou:

$$\frac{1}{4} \text{ kēne mīti kau}$$

$$\frac{1}{8} \text{ o te takaro, o te pīpī rānei i tapatapahia}$$

$$\frac{1}{3} \text{ riki nohinohi}$$

$$\frac{1}{4} \text{ kākano kākano}$$

$$\frac{1}{2} \text{ punetēpu tītī}$$

$$\frac{1}{3} \text{ kapu miraka kokonati}$$

E 6 ngā tāngata e hapa ana. E hia te nui o ia mea e hiahiatia ana e rātou?

Ka aha mēnā e 12 ngā tāngata mo te hapa?

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:

$$\text{h.t., } \frac{1}{4} + \frac{1}{8}.$$

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

Whole, half, halves, quarters, fourths, whole number, equivalent, mixed numbers, numerator, denominator.

Katoa, haurua, hauwhā, tuawhā, tau katoa, ōrite, tau whakaranu, taurunga, tauraro.

Tūmahi 9

E rua ngā akomanga e whai wāhi ana ki tētahi hōtaka kai hauora. Hei āwhina i a rātou, kua homai e tētahi toa paetata ētahi pouaka hua rākau. Kei roto i ngā pouaka e 100 mandarins, 72 āporo, me 35 pea.

Kua whakatau ngā kaiako ki te tiritiri i ngā hua i waenga i ngā akomanga e rua – ka taea e koe te mahi e hia ngā karaehe e whiwhi ana:

Ka whiwhi te Tauaha Tuatahi i te $\frac{6}{10}$ o ngā ārani.

Ka whiwhi te Karaehe Tuarua i te $\frac{3}{4}$ o ngā āporo?

Ka whiwhi te Karaehe Tuatahi i te $\frac{4}{5}$ o ngā pea?

Ko tēhea karaehe e whiwhi ana i te nuinga o ngā hua rākau?
Whakatau mēnā e whakaaro ana koe he tika tēnei.

Hei āwhina i te kaiako

I te wā o te whakarewatanga, me mātua whakapakari koe he kotahi katoa ia huinga hua rākau hei wāhanga o te whakawhanake i te horopaki.

Whakangāwari i ngā ākonga kia kite kei te kitea e rātou tētahi hautanga o te katoa ahakoa he maha ngā tūemi kei roto i taua huinga. Me aro atu hoki ki te tautapa hei whakaingoa i te mea kua wehea te katoa.

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu o te katoa me ngā wāhanga o te huinga.

Tūmanako kia whakamahia e ngā ākonga te wehenga, te wehenga rānei hei whakaoti i ngā tūmahi hautanga.

Wā toha

Tīpakohia ngā ākonga hei tiritiri kua whakamahi i tētahi whakaaturanga kua wehea ki ngā wāhanga hautau, kātahi ka whakamahi i te wehenga ā-wāhanga (hei tauira, $60 \div 6 = ?$) kua whakamahi rānei i te pātahitanga kōaro me te tāpiritanga tukurua, te whakarea rānei (hei tauira, $6 \times ? = 60$).

Ki te kore e whakamahia tētahi o ngā rongoā, whakatauiria hei huarahi anō kua kitea e te kaiako e whakamahia ana i mua.

Ngā Whakaaro Matua o te Ao

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā $\frac{2}{3}$ wāhanga kei reira ia wāe ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaatu i ia hautanga/ōwehenga e tētahi huinga mutunga kore o ngā hautanga/ōwehenga rerekē engari ōrite.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Ka taea te whakaingoa i ngā kiānga tau i roto i te maha o ngā huarahi rerekē, engari ōrite (hei tauira,

$$\frac{4}{6} \div \frac{2}{8} = \frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{1}{4} ;$$

$$26 \times 4 = (20 + 6) \times 4.$$

Hono

Tuhia te rongoā mō ia raruraru:

$$\frac{1}{10} \text{ of } 100 = 10 \quad 100 \div 10 = 10$$

$$\frac{1}{4} \text{ of } 72 = 18 \quad 72 \div 4 = 18$$

$$\frac{1}{5} \text{ of } 35 = 5 \quad 35 \div 5 = 5$$

He aha ngā tauira me ngā pātahitanga e kitea ana e koe?
He aha te ture mō te kimi hautanga o tētahi huinga?

Whainga Ako: Ka ako ngā mokopuna ki te:

Kimihia ngā hautanga o tētahi huinga.

Whakawhānuitia me pēhea te kimi i tētahi hautanga o tētahi huinga.

Ngā Tūmahi Takitahi

He pēke māpere e 396 tāu, ā, ka tiritiri ōrite koe ki ngā hoa tokotoru.
He aha te hautanga ka riro i a koe?
E hia ngā māpere ka riro i a koe?

He pēke māpere e 99 tāu, ā, ka tiritiri ōrite koe ki ngā hoa tokorua.
He aha te hautanga ka riro i a koe?
E hia ngā māpere ka riro i a koe?

He aha te haurua o te 248?
He aha te haurua o te 2480?

He aha te hauwhā o te 88?
He aha te hauwhā o te 880?

He aha te tuatoru o te 165?
He aha te tuatoru o te tau 1650?

He aha te rima o te 150?
He aha ngā rima e rua o te 150?
He aha ngā rima e whā o te 150?

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:

h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Katoa, haurua, hauwhā,
tuawhā, tau katoa, ōrite,
tau whakaranu,
taurunga, tauraro.*

Tūmahi 10

Kai te whakatō rīwai nga karaehe. E ngana ana rātau ki te mahi ko tēhea karaehe te nuinga o ngā tipu rīwai.

Karaehe 1- E toru ngā rima o te pēke rīwai kākano e 35.

Karaehe 2- E whā ngā hauono o te pēke e 30 rīwai kākano.

Karaehe 3- E toru waru o te pēke e 64 rīwai kākano.

Karaehe 4- E rua hauwhā o te pēke e 44 ngā rīwai kākano.

Hei āwhina i te kaiako

Whakangāwari i ngā ākonga kia mōhio mēnā ehara te hautanga i te hautanga wae ($\frac{1}{5}$) me whakamahi rātou i tētahi pātahitanga whakarea hei whakaaro i ngā huinga o taua tau hautanga

Aroturuki mō ngā ākonga e whakamahi ana i ngā kupu o te tau me te tautapa

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai i whakamahi i tētahi whakaaturanga kua wehea ki ngā wāhanga hautau, kātahi ka whakamahi i te tautapa hei wehe i ngā huinga rīwai kākano ki ngā wāhanga ōrite, kātahi ka whakarea te tau hei kimi i te tau i roto i te huinga.

Hono

Pātai atu ki ngā ākonga ki te whakaahua me pēhea tō whakaoti i ngā raru e whai ake nei mā te whakamahi i te tikanga rongoā ōrite:

$$\frac{2}{5} \text{ of } 25$$

$$\frac{41}{122} \text{ of } 2543$$

$$\frac{a}{b} \text{ of } c$$

He aha te ture ka taea e koe te whakamahi hei kimi i tētahi hautanga o tētahi huinga?

Ngā Whakaaro Matua o te Ao

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei.

Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā $\frac{2}{3}$ wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaingoa i ngā kīanga tau i roto i te maha o ngā huarahi rerekē, engari ōrite (hei tauira,

$$\frac{4}{6} \div \frac{2}{8} = \frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{1}{4} ;$$

$$26 \times 4 = (20 + 6) \times 4).$$

Whaingā Ako: Ka ako ngā mokopuna ki te:

Kimihia ngā hautanga o tētahi huinga.

Whakawhānuitia me pēhea te kimi i tētahi hautanga o tētahi huinga.

Ngā Tūmahi Takitahi

Kai te whakatō rīwai nga karaehe. E ngana ana rātau ki te mahi ko tēhea karaehe te nuinga o ngā tipu rīwai.

Karaehe 1 - E $\frac{2}{3}$ o te pēke rīwai kākano e 39

Karaehe 2 - E $\frac{3}{4}$ te pēke e 32 rīwai kākano

Karaehe 3 - E $\frac{3}{8}$ o te pēke e 48 rīwai kākano.

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:

h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Whole, thirds, ninths,
tenths, fifths, equal,
equivalent, fair share,
partitioning, numerator,
denominator.*

*Katoa, hautorua,
hauīwa, hautekau,
haurima, orite, tiritiri
tika, wehewehe,
taurunga, tauraro.*

Tūmahi 11

Kua pānui a Sione i te $\frac{2}{3}$ o tēnei pukapuka, ā, kei te whārangi 26. E hia ngā whārangi kei roto i te pukapuka?

Kua pau i a Mele te \$28, arā, ko te $\frac{1}{4}$ o tana moni rā whānau. E hia ana moni rā whānau?

Kua hoatu e Tali te $\frac{3}{12}$ o ana whakapiripiri, arā, e 18. E hia ngā whakapiripiri i tīmata ai a Tatali?

Hei āwhina i te kaiako

Whakangāwari i ngā ākonga kia mōhio mēnā ehara te hautanga i te hautanga wae, me whakamahi rātou i tētahi pātahitanga whakarea hei whakaaro i ngā huinga o taua tau hautanga.

Aroturuki mō ngā ākonga e whakamahi ana i te kupu o te tau me te tautapa

Wā toha

Kimihia te hautanga wae mō te huinga, kātahi ka whakamahi i te tautapa hei whakarea hei kimi i te huinga katoa.

Tauira e tohu ana i te tūmahi mā te tauira pae hautanga me te raina-tau.

Hono

Tonoa ngā ākonga ki te whakaahua me pēhea rātou e whakaoti ai i ngā tūmahi e whai ake nei:

Kua pānui a Tasa i te $\frac{3}{8}$ o tētahi pukapuka, ā, kei te whārangi 99. E hia ngā whārangi i roto i te pukapuka?

I pau i a Sia te \$98, arā, ko te $\frac{2}{6}$ o ana penapena. E hia ana penapena i roto i ana penapena?

Ka taea e koe te whakatakoto ture hei whakaoti i ēnei momo tūmahi?

Ngā Whakaaro Matua o te Ao

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaatu i ia hautanga/ōwehenga e tētahi huinga mutunga kore o ngā hautanga/ōwehenga rerekē engari ōrite.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Ka taea te whakaingoa i ngā kīanga tau i roto i te maha o ngā huarahi rerekē, engari ōrite (hei tauira,

$$\frac{4}{6} \div \frac{2}{8} = \frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{1}{4} ;$$

$$26 \times 4 = (20 + 6) \times 4).$$

Whaingā Ako: Ka ako ngā mokopuna ki te:

Whakamahia te tangohanga tukurua hei wehenga.

Whakaotia ngā raru e pā ana ki te whakawehe i tētahi tau whāranu ki te hautanga.

Ngā Tūmahi Takitahi

Kua pānui a Mika $\frac{1}{8}$ i tēnei pukapuka, ā, kei te whārangi 12. E hia ngā whārangi i roto i te pukapuka?

Kua pau i a Peni te \$66 arā, ko te $\frac{4}{6}$ o tana moni rā whānau. E hia ana moni rā whānau?

Kua hoatu e Loti te $\frac{7}{12}$ o ana whakapiripiri, e 21. E hia ngā whakapiripiri i tīmata ai a Loti?

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:
h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Whole, half, halves,
eighths, whole number,
equal, equivalent,
section, mixed numbers,
numerator,
denominator.*

Tūmahi 12

Whakaotia ēnei whārite:

1. $\frac{1}{-2} + \frac{1}{-2} + \frac{1}{-2} + \frac{1}{-2} + \frac{1}{-2} =$

2. $\underline{\hspace{1cm}} = 1\frac{1}{10} + \frac{1}{2}$

3. $? = \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

4. $4\frac{2}{5} + \underline{\hspace{1cm}} = 6$

5. $4 \times \frac{1}{4} = 3 \times \frac{1}{4}$

6. $\underline{\hspace{1cm}} = 5 - 2\frac{2}{7}$

7. $8 \times \frac{1}{2} =$

8. $\frac{1}{5} - \frac{1}{12} =$

9. $\frac{3}{4} + \frac{3}{4} = ? + \frac{1}{2}$

10. $\frac{4}{5} - \underline{\hspace{1cm}} = \frac{1}{3}$

Kia rite ki te whakamārama me te whakatika i ō whakamāramatanga mā te whakamahi i ngā whakaaturanga me te tuihanga rānei.

Hei āwhina i te kaiako

Whakangāwari i ngā ākonga ki te tuhi i ngā pātahitanga kua kitea e rātou hei tāpiritanga, tangohanga, whakareatanga me te wehewehenga.

Kia mōhio ki ngā ākonga e āhei ana ki te whakawhānui i ngā tauira puta noa i ngā tautapa.

Wā toha

Tīpakohia ngā ākonga hei tiritiri e āhei ana ki te tuhi i ngā āhuratanga tau me ngā ture whakahaere tae atu ki te māramatanga o te tohu ōrite hei whakatika i ngā raruraru.

Ngā Whakaaro Matua o te Ao

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ka whakaahuatia e te hautanga te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & b 0), ā, e rua ngā huarahi ka taea te whakamārama i te raina tau. Hei tauira, $\frac{2}{3} = 2 \div 3$.

I runga i te raina tau, ka taea te whakamārama i te $2 \div$ te 3 hei wāhanga e 2 ngā wāhanga kei reira ia wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te whakaatu i ia hautanga/ōwehenga e tētahi huinga mutunga kore o ngā hautanga/ōwehenga rerekē engari ōrite.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Ka taea te whakaingoa i ngā kīanga tau i roto i te maha o ngā huarahi rerekē, engari ōrite (hei tauira,

$$\frac{4}{6} \div \frac{2}{8} = \frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{1}{4} ;$$

$$26 \times 4 = (20 + 6) \times 4).$$

He ōrite ngā pānga o ngā mahi mō te tāpiri me te tangohanga ki ngā hautanga me ngā ā-ira ki ērā me ngā tau oti.

Ko ngā hautanga kāore i te rite ki ngā tautapa ka whakaingoa anōtia hei hautanga ōrite me ngā tautapa ōrite hei tāpiri me te tango.

Hono

Tāngia ngā rautaki rongoā ākonga hei miramira i ngā ture whakahaere i whakamahia e ngā ākonga hei whakaoti i ngā raruraru (hei tauira, te whanaungatanga kōaro, te āhuatanga komu).

Tūhono anō ki te tau me te wae taurangi hei miramira e mahi ana ngā āhuatanga ki ngā tau katoa tae atu ki ngā hautanga.

Whaingā Ako: Ka ako ngā mokopuna ki te:

Whakaotia ngā raru tau ngaro e pā ana ki ngā hautanga.

Whakaotia ngā raru tāpiri e pā ana ki ngā hautanga.

Whakaotia ngā raruraru tangohanga e pā ana ki ngā hautanga.

Whakaotia ngā raruraru whakarea e pā ana ki ngā hautanga.

Whakaoti i ngā raruraru wehewehenga e pā ana ki ngā hautanga.

Whakamahia ngā ture whakahaere hei whakatika i ngā raruraru tau ngaro e pā ana ki ngā hautanga.

Ngā Tūmahi Takitahi

Whakaotia tētahi o ngā Tūmahi Aromatawai:

Aromatawai 1: Ngā Hautanga/Ōwehenga

Aromatawai 2: Ngā hautanga (tautuhi)

Marautanga

Tau 5

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te whakamahi whakareatanga.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro.

Tāpiri me te tango tau ā-ira, kia rua ngā mati ā-ira.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakarūnā hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi, mō ngā hautau, me ngā tauraro pātahi ki te 10.

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu, mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{2}{3}$ of 24.

Tau 6

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana, e whai pānga rānei ngā tauraro:
h.t., $\frac{1}{4} + \frac{1}{8}$.

Tautohu, ki te whakatairite ki te whakaraupapa hoki i ngā hautau me ngā tauraro 2, 3, 4, 5, 6, 8, 10, 12, 100.

Tautohu i ngā hautau e whai pānga ana tētahi ki tētahi whakaruna hautau.

Huri i ngā hautau nui ake i te kotahi hei tau hanumi.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Reo Pāngarau

*Katoa, haurua, hauwaru,
tau katoa, ōrite,
wahanga, tau
whakaranu, taurunga,
tauraro.*

Aromatawai 1

Whakaraupapatia ēnei hautanga mai i te iti rawa ki te nui rawa.

$$\frac{2}{2}$$

$$\frac{3}{4}$$

$$\frac{5}{10}$$

$$\frac{3}{9}$$

$$\frac{8}{12}$$

$$\frac{5}{6}$$

Whakamārama, whakaatu hoki me pēhea koe e mōhio ai ki tēnei.

Aromatawai 2

I whakatō kākano a Josh, Tamati rāua ko Emelia ki te māra.

I whakatōkia e Josh e rua hautoru $\frac{2}{3}$ o tētahi pēke e 39 kākano.

I whakatōkia e Tamati e toru hauwhā $\frac{3}{4}$ o te pēke e 32 kākano.

I whakatōkia e Emelia e toru waru $\frac{3}{8}$ o tētahi pēke e 48 kākano.³⁸

Na wai i whakatō te nuinga o ngā kākano? Ko wai i whakatō i te iti rawa?

Whakamārama, whakaatu hoki me pēhea koe e mōhio ai ki tēnei.