

MATHEMATICAL INQUIRY BOOKLETS

Tau me te Taurangi

Tūārere 2 (Tau 4)

Pukapuka Kaiako

<p>Rapanga 1</p>	<p>Whakaotia ngā whārite. He aha tāu i kite ai?</p> <p>165 + 32 =</p> <p>144 + 314 =</p> <p>421 + 545 =</p> <p>Whakaaturia ō whakaaro mā te whakamahi whārite me tētahi raina tau wātea.</p>
<p>WHakaaro matua o te Ao Pangarau</p>	<p>E hāngai ana ta mātau pūnaha tau i runga anō i nga whakarōpū o te tekau, te take rānei tekau. Ko nga whakarōpūtanga o ngā mea, tekau, rau, me ngā mano e āhei ana ki te wehe i nga huarahi rerekē. Ka taea te whakapūketete i ngā mahi tau me ngā rautaki hei whakaoti i ngā mahi tau mā te whakamahi i ngā kupu, tau, hoahoa, me ngā tohu.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki.
<p>Whaingā Ako:Ka ako nga mokopuna ki te:</p>	<p>Tāpirihia ngā mea, tekau, me ngā rau.</p> <p>Whakamahia te uara wāhi hei whakatika i ngā raruraru tāpiri.</p> <p>Whakaingoatia te wāhi, te kanohi, me te uara tapeke o ngā tau.</p> <p>Whakaatu whakaaro mā te whakamahi i tētahi raina tau me te</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	tuhipoka.
Nga Tini mata o te Reo Pangarau	Tekau, ngā mea, rau, uara wāhi, uara kanohi, uara tāpeke, pūtake tekau.
Wa Toha me te Hono	<p>Tīpakohia ngā rautaki rongoā ākongā e arotahi ana ki te uara wāhi me ngā mea e pā ana ki ngā mea, tekau, me ngā rau. Whakamahia tētahi raina tau wātea hei tāhopu i te tāpiri i roto i te tekau, rau me ngā pahekotanga o ēnei.</p> <p>Whakahautia te reo me ngā ariā o te uara wāhi kōhanga (hei tauira, e rima rau e 5 rau, e rua tekau rānei, e rua tekau mā rua tekau, e whā tekau mā whā tekau, e 4 tekau mā rua tekau, e 2 tekau me te 4 tekau, ā, e 6 tekau, e ono tekau rānei).</p> <p>Hono:</p> <p>Hei tauira te whakauru i te whare uara wāhi. Pātai atu ki ngā ākongā hei whakamārama me pēhea te whakamahi i te uara wāhi hei whakatika i ēnei whārite:</p> <p>$372 + 215 =$</p> <p>$621 + 357 =$</p>
Hei Awhina i te kaiako	<ol style="list-style-type: none"> 1. I mua i tō whakarewatanga i te tūmahi, tuhi 359 ki runga i te papa. Pātai atu ki ngā ākongā kia mōhio ki te tau me te whakaahua i ngā huarahi maha e taea ana e rātou. Miramiratia te uara wāhi, te uara kanohi me te uara tapeke i te tau. Whakaotia tēnei ngohe hei mahana puta noa i te wae mahi me te whakanui ake i ngā tau tae atu ki te 10 000. 2. Kia wātea ngā rauemi raima mēnā e hiahiatia ana e ngā ākongā hei tīpako (hei tauira, kāri pere, moni i roto i ngā tuhipoka me ngā mea e \$10, me ngā papa 100). 3. Pēhi tika mō te uara wāhi me te kanohi me te uara tapeke. 4. E tūmanako ana ngā tamariki kia tohu i a rātau whakaaro i runga i tētahi raina tau wātea me te aroturuki i ngā pekenga i roto i ngā tau kotahi tekau, nui ake rānei. Ki te kore ngā ākongā e whakamahi i tētahi aho tau wātea, whakaurua hei whakaaturanga. <ul style="list-style-type: none"> • Ka taea te mōhio ki ngā huinga tekau (me te tekau tekau) hei mea kotahi e.g. 30 ko te 3 tekau tekau; Ina tāpiri mātou i te 40 e tāpiri ana mātou i te 4 tekau mā rua; E 5 rau te 500. Mahia kia mārāma te $30 + 10$ ko te 3 tekau me te 1 tekau. E whakamiramira ana tēnei i te āhua kōhanga o te uara wāhi. Ko te uara wāhi ko te ariā kei roto ngā wae uara wāhi ki ētahi atu wae uara wāhi, hei tauira, kotahi tekau kei roto i ngā rau, ā, he rau kei roto i ngā mano.

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

Rapanga Motuhake	Whakaoti ngā whārite nei: $55 + 22 =$ $34 + 35 =$ $155 + 43 =$ $53 + 236 =$ $451 + 246 =$ He aha ngā taurira ka kitea e koe?
Ma te kaiako	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Rapanga 2	<p>I kohia e Urita e 174 nga anga. E 62 nga anga e whakamahia ana e ia hai mahi kaki mo tōna tuahine. E hia nga anga e toe ana a Urita?</p> <p>I kohia e Mele e 359 nga anga. E 126 nga anga e whakamahia ana e ia hai hanga i te kaki mo ōna tuahine. E hia ngā anga kua mahue i a Mele?</p> <p>E 567 nga anga i kohia e Pikison. E 345 a ia hai mahi i te kakī mo ōna tuahine. E hia nga anga kua mahue i a Piki?</p>
WHakaaro matua o te Ao Pangarau	<p>E hāngai ana ta mātau pūnaha tau i runga anō i nga whakarōpū o te tekau, te take rānei tekau. Ko nga whakarōpūtanga o ngā mea, tekau, rau, me ngā mano e āhei ana ki te wehe i nga huarahi rerekē. Ka whakamahia ngā tau hei whakaingoa i ngā rahinga tauwhāiti. Ka taea te whakawātea i ngā tau ki ngā wāhanga i roto i ngā huarahi kāore e taea te huri i te nuinga. Ka taea te whakapūkete i ngā mahi tau me ngā rautaki hei whakaoti i ngā mahi tau mā te kupu, tau, hoahoa, me ngā tohu.</p>
Nga tini mata o te Marautanga	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4.

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	<ul style="list-style-type: none"> • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki.
Whaingā Ako:Ka ako nga mokopuna ki te:	Whakamahia te uara wāhi hei whakatika i ngā rapanga tango Whakaatu whakaaro mā te whakamahi i tētahi raina tau me te tuhipoka.
Nga Tini mata o te Reo Pangarau	Tekau, Kotahi, tāpiri, tango
Wa Toha me te Hono	<p>Tīpakohia ngā rautaki rongoā ākongā kua whakamahi uara wāhi:</p> <p>$174 = 100 + 70 + 4$ so to take away 62 ...</p> <p>$100 - 0 = 100$</p> <p>$70 - 60 = 10$</p> <p>$4 - 2 = 2$</p> <p>$174 - 62 = 112$</p> <p>or</p> <p>$174 - 60 = 114$</p> <p>$114 - 2 = 112$</p> <p>Pātai atu ki ngā ākongā kia tohu, kia tauira rānei me pēhea te tohu mā te whakamahi i ngā whārite me tētahi raina tau wātea</p> <p>Hono:</p> <p>Pātai atu ki ngā ākongā kia whakamārama me pēhea tō whakaoti i ngā whārite e whai ake nei mā te uara wāhi me te hono ki tētahi whare uara wāhi:</p> <p>$284 - 162 =$</p> <p>$978 - 426 =$</p>
Hei Awhina i te kaiako	<ul style="list-style-type: none"> • I mua i tō whakarewatanga i te tūmahi, tuhi 837 ki runga i te papa. Pātai atu ki ngā ākongā kia mōhio ki te tau me te whakaahua i ngā huarahi maha e taea ana e rātou. Miramiratia te uara wāhi, te uara kanohi me te uara tapeke i te tau. Whakaotia tēnei ngohe hei mahana puta noa i te wae mahi me te whakanui ake i ngā tau tae atu ki te 10 000. <p>1. Kia wātea ngā rauemi raima mēnā e hiahiatia ana e ngā ākongā hei tīpako (hei tauira, kāri pere, tāpare tekau tōmua, moni i roto i ngā tuhipoka \$100, \$10 me te \$1).</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	<ol style="list-style-type: none"> 1. E tūmanako ana ngā ākonga kia tohu i a rātau whakaaro i runga i tētahi raina tau wātea me te aroturuki i ngā pekenga i roto i te 100, i te 10 rānei. Ki te kore ngā ākonga e whakamahi i tēnei, whakamōhiohia tō rātou whakamahinga hei whakaaturanga. 2. E tūmanako ana hoki ngā ākonga ki te whakamahi i ngā whārite hei tohu i a rātau whakaaro. Tauira i tēnei ki te kore ngā ākonga e whakamahi whārite. <ul style="list-style-type: none"> • E mōhio ana ki ngā ākonga e whakaiti ana mā te whakamahi i ngā rau, tekau, me ngā mea.
<p>Rapanga Motuhake</p>	<p>I kohia e Urita e 97 nga anga. E 62 nga anga e whakamahia ana e ia hai mahi kaki mo tōna tuahine. E hia nga anga e toe ana a Urita?</p> <p>I kohia e Mele e 249 nga anga e whakamahia ana e ia e 137 nga anga hai hanga i te kaki mo ōna tuahine. E hia ngā anga kua mahue i a Mele?</p> <p>E 456 nga anga i kohia e Kai. E 232 nga anga e whakamahia ana e ia hai hanga i te kaki mo tōna tuahine. E hia ngā anga kua mahue i a Pae?</p> <p>I kohia e Pikison e 675 te anga. E whakamahia ana e ia te 351 hai mahi kaki mo tōna tuahine. E hia nga anga kua mahue i a Piki?</p>
<p>Ma te kaiako</p>	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 3</p>	<p>E 237 nga kāri Pokemon o Talia i roto i tana kohinga. E 54 anō nga kāri Pokemon e hoatu ana ki a ia. E hia ngā kāri Pokemon e tino nui ana?</p> <p>E 468 nga kāri Pokemon o Sose i roto i tana kohinga. E 326 nga kāri i hoatu e tōna tuahine ki a ia. E hia ngā kāri Pokemon ināianei?</p> <p>He kohinga kāri Mekapa a Tasi me ngā kāri e 873. E 456 anō ngā kāri Pokemon e hoatu ana ki a ia. E hia ngā Pokem i runga kāri e tino nui ana a Tasi?</p>
<p>WHakaaro matua o te Ao Pangarau</p>	<p>Ka whakamahia ngā tau hei whakaingoa i ngā rahinga tauwhāiti. Ka taea te whakawātea i ngā tau ki ngā wāhanga i roto i ngā huarahi kāore e taea te huri i te nuinga.</p> <p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p> <p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua ngā rahinga e ōrite ana ki te rahinga tuatoru ōrite e ōrite ana ki a rāua anō.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki.
<p>Whainga Ako:Ka ako nga mokopuna ki te:</p>	<p>Ngā tau tārewa me te whakahoki anō tae atu ki te 1000.</p> <p>Whakamahia te uara wāhi hei whakatika i ngā raruraru tāpiri.</p> <p>Whakamahia te bridging mā te nuinga o ngā tau hei whakatika i ngā raruraru tāpiri.</p> <p>Whakamahia te ōritetanga me te utu hei whakatika i ngā raruraru tāpiri.</p> <p>Whakaatu whakaaro mā te whakamahi i tētahi raina tau me te tuhipoka.</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

Nga Tini mata o te Reo Pangarau	Tekau, Kotahi,rau, mano, tāpiri, tango
Wa Toha me te Hono	<p>Tīpakohia ngā rautaki rongoā ākongā kua arawhiti puta noa i te tekau tau, i whakamahia rānei te ōritetanga me te utu. Ki te kore tētahi ākongā e whakatika i te tūmahi pēnei, kātahi ka whakauru atu i te rautaki rongoā hei tauira whirinoa e whakamahia ana e ētahi atu ākongā.</p> <p>Whakamahia ngā whakaaturanga maha hei tohu i ngā rautaki rongoā ākongā tae atu ki tētahi raina tau wātea, whārite, me ngā tāpare tekau.</p> <p><i>Bridging across tens and hundreds</i></p> $468 + 326 =$ $468 + 2 = 470 \quad 326 - 2 = 324$ $470 + 30 = 500 \quad 324 - 30 = 294$ $500 + 200 = 700 \quad 294 - 200 = 94$ $700 + 94 = 794$ <p><i>Equivalence and compensation</i></p> $468 + 326 =$ $470 + 326 = 796$ $796 - 2 = 794$ <p>Hono:</p> <p>Pātai atu ki ngā ākongā kia whakaahua me pēhea tō whakatika i te whārite e whai ake nei mā te whakamahi i te bridging puta noa i te tekau tau me te utu:</p> $789 + 155 =$
Hei Awhina i te kaiako	<ol style="list-style-type: none"> 1. Kia wātea ngā rauemi raima mēnā e hiahiatia ana e ngā ākongā hei tīpako (hei tauira, kāri pere, ngā tāpare tekau kua tā kētia, ngā moni i roto i ngā rau, tekau, me ngā mea) hei whakamahi mō ngā rongoā wāhanga (e tāpiri ana i te tekau me ngā mea) mēnā e hiahiatia ana. 2. Me mōhio ki ngā ākongā e tāpiri ana i ngā tau mā te whakawhāiti ki te tekau tau tata rawa. 3. E mōhio ana ki ngā ākongā e whakamahi ana i te ōritetanga me te utu. <ul style="list-style-type: none"> • Tatari kia tohu ngā ākongā mā te whakamahi i tētahi raina tau wātea me ngā whārite.
Rapanga Motuhake	Kai te tākaro a Tiana rāua ko Hamu me nga paraka. E 236 ngā paraka o Tiana. E 58 nga paraka o Hamu. E hia ngā paraka kei a rātou katoa?

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	<p>Kai te tākaro a Soane rāua ko Frankie me nga paraka. E 244 nga paraka o Soane. E 339 nga paraka o Frankie. E hia ngā paraka kei a rātou katoa?</p> <p>Kai te tākaro a Lily rāua ko Regan me ngā paraka. E 387 ngā paraka o Lily. E 338 ngā paraka o Regan. E hia ngā paraka kei a rātou katoa?</p>
Ma te kaiako	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 4</p>	<p>I te huihuinga o te whānau, e 143 nga tāngata. E 68 nga pakeke, a, he tamariki te toenga. E hia nga tamariki i reira?</p> <p>I te huihuinga o te whānau, e 421 nga tāngata. E 219 nga pakeke, a, he tamariki te toenga. E hia nga tamariki i reira?</p> <p>I te huihuinga o te whānau, e 514 nga tāngata. E 386 nga pakeke, a, he tamariki te toenga. E hia nga tamariki i reira?</p>
<p>WHakaaro matua o te Ao Pangarau</p>	<p>Ka whakamahia ngā tau hei whakaingoa i ngā rahinga tauwhāiti. Ka taea te whakawātea i ngā tau ki ngā wāhanga i roto i ngā huarahi kāore e taea te huri i te nuinga.</p> <p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p> <p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua nga rahinga e ōrite ana ki te nuinga tuatoru kotahi e ōrite ana ki a rāua anō.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki.
<p>Whaingā Ako:Ka ako nga mokopuna ki te:</p>	<p>Ngā tau tārewa me te whakahoki anō tae atu ki te 1000.</p> <p>Whakamahia te tango i ētahi wāhanga hei whakatika i ngā rapanga tango</p> <p>Whakamahia te ōritetanga me te utu hei whakatika i ngā raruraru whakaiti.</p> <p>E whakaatu ana i te whakaaro mā te whakamahi i tētahi raina tau me te tuhipoka.</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

Nga Tini mata o te Reo Pangarau	Rau, tekau, tāpiri, tango
Wa Toha me te Hono	<p>Tirohia me te tīpako i ngā rautaki rongoā ākongā i reira i whakaritea ai e rātou ki ngā wāhanga, ki te whakamahi rānei i te ōritetanga me te utu. Whakaaturia tēnei mā te whakamahi whārite me tētahi raina tau wātea.</p> <p><i>Tangohia i ngā wāhanga</i></p> $421 - 219 =$ $421 - 200 = 221$ $221 - 10 = 211$ $211 - 9 = 202$ <p><i>Ōritetanga me te utu</i></p> $421 - 219 =$ $421 - 220 = 401$ $401 + 1 = 402$ <p>Hono:</p> <p>Pātai atu ki ngā ākongā kia whakaahua me pēhea tō whakatika i ngā whārite e whai ake nei mā te whakamahi i ngā wāhanga me te ōritetanga me te utu:</p> $852 - 627 =$ <p>Whakamahia tētahi raina wātea me ngā whārite hei tohu i ō rātou whakaaro.</p>
Hei Awhina i te kaiako	<ol style="list-style-type: none"> 1. Ka taea e ngā ākongā te whakaiti i ngā wāhanga, te whakamahi rānei i te ōritetanga me te utu (kia nui ake, kātahi ka whakarite ōrite). 2. Ka taea e ngā ākongā te whakatika mā te whakamahi i ngā pātahitanga kōaro (hei tauira, $219 + ? = 421$). Whakamahia tēnei hei miramira i te pātahitanga i waenga i te tāpiritanga me te mahiroto. <ul style="list-style-type: none"> • Tatari kia tohu ngā ākongā mā te whakamahi whārite me ngā raina tau wātea.
Rapanga Motuhake	<p>E 247 nga whakapiripiri o Mae i roto i tana kohinga. I whakamahia e ia te 69 hai whakawātea i tōna rūma moe. E hia nga whakapiripiri kua mahue i a ia?</p> <p>E 432 nga whakapiripiri o Timo i roto i tana kohinga. I whakamahia e ia te 215 hai whakawātea i tōna rūma moe. E hia nga whakapiripiri kua mahue i a ia?</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	E 764 nga whakapiripiri o Sione i roto i tana kohinga. I whakamahia e ia te 546 hai whakawātea i tōna rūma moe. E hia nga whakapiripiri kua mahue i a ia?
Ma te kaiako	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 5</p>	<p>E 146 nga rārangi kōkōnati i hangaia e Tirata hai hoko i nga māketē. Ka tono a ia ki a Mereana kia nui ake tana mahi. Ināianeī e 214 nga rārangi koni o Tirata hai hoko. E hia nga rārangi koni i mahia e Mereana?</p> <p>He pouaka pukapuka to te rūma 12 hai hoko i te ataahua. I hoatu ki a rātau tētahi atu pouaka pukapuka me nga pukapuka e 119 i roto. Ināianeī e 302 nga pukapuka hai hoko. E hia nga pukapuka i roto i te pouaka tuatahi?</p> <p>E 241 nga ipu keke o Marama hai hoko i te māketē. I hokona e ia ētahi, a, e 88 nga ipu e toe ana. E hia nga ipu keke i hokona e ia?</p> <p>He maha nga pukapuka hai hoko i te wāhi pukapuka i te ataahua. E 277 nga pukapuka i hokona e rātau, a, e 245 nga pukapuka e toe ana. E hia nga pukapuka i tīmata ai rātau?</p>
<p>WHakaaro matua o te Ao Pangarau</p>	<p>Ka whakamahia ngā tau hei whakaingoa i ngā rahinga tauwhāiti. Ka taea te whakawātea i ngā tau ki ngā wāhanga i roto i ngā huarahi kāore e taea te huri i te nuinga.</p> <p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p> <p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua nga rahinga e ōrite ana ki te nuinga tuatoru kotahi e ōrite ana ki a rāua anō.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki.

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Whaingā Ako:Ka ako nga mokopuna ki te:</p>	<p>Decompose and recompose numbers up to 500. Whakaotia te huringa o ngā raruraru tāpiri tē mōhiohia me ngā raruraru tango. Whakaotia te tāpiritanga tē mōhiohia me ngā raruraru tango. Whakamahia te tāpiri, te whakauru rānei ki ngā tekau tau, rau rānei hei whakatika i ngā raruraru tāpiri me te whakaiti. Whakamahia te ōritetanga me te utu hei whakatika i ngā raruraru tāpiri me te mahiroto. Whakamahia te pātahitanga kōaro o te tāpiritanga me te mahiroto hei whakatika i ngā raruraru. E whakaatu ana i te whakaaro mā te whakamahi i tētahi raina tau me te tuhipoka.</p>
<p>Nga Tini mata o te Reo Pangarau</p>	<p>pātahitanga kōaro, Rau, tekau, kōtahi, tāpiri, tango,</p>
<p>Wa Toha me te Hono</p>	<p>Tīpakohia tētahi rautaki rongoā ākongā e whakamahi ana i te tāpiritanga me tētahi atu mea kua whakamahia te tango. Whakangāwaritia ngā ākongā hei whakataurite i ngā rautaki rongoā me te whakamahi i tēnei hei miramira i te pātahitanga kōaro i waenga i te tāpiritanga me te tango. Ki te kore ngā ākongā e whakatika i ngā tūmahi mā te whakamahi i ngā mahi e rua, kātahi ka whakaurua atu he rautaki rongoā hei tauira whirinoa e whakamahia ana e ētahi atu ākongā.</p> <p>Hono:</p> <p>Tonoa ngā ākongā kia tohu i ngā āhuatanga e whai ake nei mā te whakamahi i ngā whārite rerekē e rua neke atu rānei mō ia āhuatanga:</p> <p>E rima tekau mā rima i roto i tana kaute pēke a Tali. E pau ana i a ia ētahi i te toa, a, e rima tekau mā rima tōna mauī. E hia te nui o te whakapau a Tali?</p> <p>He moni anō a Tali i roto i tana kaute pēke. E pau ana i a ia te \$59 i te toa, a, e rima tekau mā rima tōna mauī. E hia te nui o ngā moni i tīmata ai a Tali?</p>
<p>Hei Awhina i te kaiako</p>	<ol style="list-style-type: none"> 1. Whakarewahia ēnei tūmahi kotahi mā te tonu i ngā ākongā kia mahi i te tauari kia āhei ai rātou ki te uru ki te hanganga o ngā tūmahi. 2. Ka taea te whakaoti i ngā tūmahi katoa mā te tātuhi i ngā pātahitanga kōaro o te tāpiritanga me te mahiroto, ā, ka whakaoti mā te mahi. <ul style="list-style-type: none"> • Arotahi ki ngā ākongā tautoko hei tohu mā te whakamahi whārite me tētahi raina tau wātea hei whakatika i ngā tūmahi. E hiahia ana pea e ngā ākongā te tautoko kia uru ki te hanganga o te tūmahi.
<p>Rapanga</p>	<p>Pānuitia ia raru me te tuhi i te whārite kia ōrite ki te āhuatanga raruraru</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Motuhake</p>	<p>i mua i tō whakaotinga o te tūmahi.</p> <p>I tunu ngā kaiāwhina ngā tōtiti 78 I tea ta. I te ahiahi tunua ētahi atu tōtiti. I te mutunga o te rā 165 ngā tōtiti tunua. E hia ngā tōtiti tunua te ahiahi?</p> <p>I te wāhi inu, ka hokona e rātau ētahi pounamu rēmana me te 236 pounamu ārani. I hokona katoatia e rātau e 422 nga pounamu inu. E hia nga pounamu rēmana i hokona e rātau?</p> <p>I te wāhi inu ka hokona e rātau he nui nga pounamu inu. I hokona e rātau e 455 ngā pounamu i te rā, a, e 161 nga pounamu e toe ana. E hia nga pounamu i tīmata ai rātau?</p>
<p>Ma te kaiako</p>	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 6</p>	<p>Whakaoti ēnei whārite:</p> $445 + 397 =$ $2256 + 589 =$ $675 - 237 =$ $1452 - 394 =$
<p>WHakaaro matua o te Ao Pangarau</p>	<p>Ka whakamahia ngā tau hei whakaingoa i ngā rahinga tauwhāiti. Ka taea te whakawātea i ngā tau ki ngā wāhanga i roto i ngā huarahi kāore e taea te huri i te nuinga.</p> <p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p> <p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua nga rahinga e ōrite ana ki te nuinga tuatoru kotahi e ōrite ana ki a rāua anō.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki.
<p>Whainga Ako:Ka ako nga mokopuna ki te:</p>	<p>Whakamahia te tāpiri, te tango rānei i ngā wāhanga hei whakatika i te tāpiritanga me te tango raruraru.</p> <p>Whakamahia te ōritetanga me te utu hei whakatika i ngā raruraru tāpiri me te tango.</p> <p>E whakaatu ana i te whakaaro mā te whakamahi i tētahi raina tau me te tuhipoka.</p>
<p>Nga Tini mata o</p>	<p>E hia mano, rau, tekau, ngā mea, tāpiri, tango</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

te Reo Pangarau	
Wa Toha me te Hono	<p>Tīpakohia ngā rautaki rongoa ākonga kua tāpirihia, kua tangohia rānei i ngā wāhanga, i whakamahia rānei te ōritetanga me te utu. Whakaaturia tēnei ki ngā whārite me tētahi raina tau wātea.</p> <p>Hono:</p> <p>Pātai atu ki ngā ākonga kia whakaahua me pēhea tō whakaoti i ngā whārite e whai ake nei mā te whakamahi i te tāpiritanga/minus i ngā wāhanga, i te ōritetanga rānei me te utu:</p> <p>$2977 + 439 =$</p> <p>$3676 - 598 =$</p>
Hei Awhina i te kaiako	<ol style="list-style-type: none"> 1. Kia wātea ngā rauemi raima mēnā e hiahiatia ana e ngā ākonga hei tīpako (hei tauira, kāri pere, ngā tāpare tekau kua tā kētia, ngā moni i roto i ngā rau, tekau, me ngā mea) hei whakamahi mō ngā rongoa wāhanga (e tāpiri ana i te tekau me ngā mea) mēnā e hiahiatia ana. 2. Tirohia ngā ākonga e tāpiri ana i ngā tau mā te whakawhāiti ki te tekau tau tata rawa. 3. Kimihia ngā ākonga e whakamahi ana i te whakatata me te tauwhiti. <ul style="list-style-type: none"> • Tatari kia tohu ngā ākonga mā te whakamahi i te raina tau wātea me ngā whārite.
Rapanga Motuhake	<p>Whakaotia ngā raruraru e whai ake nei:</p> <p>$1266 + 237 =$</p> <p>$656 + 3128 =$</p> <p>$753 - 418 =$</p> <p>$3671 - 539 =$</p> <p>Whakaaturia ō whakaaro mā te whakamahi whārite me tētahi raina tau wātea.</p>
Ma te kaiako	

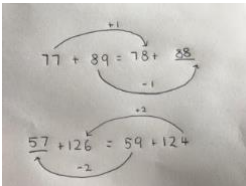
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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Rapanga 7	<p>Ka taea e koe te kite i ngā tau ngaro?</p> <p>$47 + 16 = _ + 15$</p> <p>$_ + 77 = 36 + 79$</p> <p>$129 + _ = 139 + 68$</p> <p>$235 + 58 = 234 + _$</p>
WHakaaro matua o te Ao Pangarau	<p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua nga rahinga e ōrite ana ki te nuinga tuatoru kotahi e ōrite ana ki a rāua anō.</p>
Nga tini mata o te Marautanga	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki. • Ngā Wharite me ngā Panga Tau 5

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	<ul style="list-style-type: none"> tuhi me te whakaoti whārite pono, whārite parau rānei, whārite whānui hoki e whai wāhi mai ana ngā pāheko e whā: h.t., $674 + 56 - k = 671$.
Whaingā Ako:Ka ako nga mokopuna ki te:	Whakamārama me te whakatautika i ngā pātahitanga i waenga i ngā tau i roto i te whārite. Whakaoti i ngā raruraru ōrite me te whakamārama me te whakatautika i ngā rongoā.
Mathematical language	Tohu ōrite, pātahitanga, rerekētanga, tāpiri, tango.
Wa Toha me te Hono	<p>Whakaae i ngā ākongā kia tiritiri i ngā mōhiotanga e pā ana ki te tohu ōrite (hei tauira, $47 + 16 = 63 + 15$) ki te whakatū i a rātou kia uru ki te tautohe.</p> <p>Tīpakohia ngā ākongā hei tiritiri nāna i whakamahi i tētahi rautaki pānga hei kimi i te tau ngaro. Ki te kore ngā ākongā e whakamahi i tētahi rautaki pānga, whakamōhiotia tēnei ki a rātou mā te whakamahi i ngā pere me ngā whakamāramatanga.</p>  <p>Hono:</p> <p>Tono atu ki ngā ākongā kia kitea ngā tau ngaro mā te kimi i te pātahitanga puta noa i te tohu ōrite me te whakaatu i tēnei mā te whakamahi pere.</p> <p>$69 + \underline{\quad} = 67 + 85$</p> <p>$146 + 78 = 156 + \underline{\quad}$</p>
Hei Awhina i te kaiako	<p>1. I mua i tō whakarewa i te tūmahi, pātai atu ki ngā ākongā kia kōrerorero i ēnei rerenga tau pono, hē hoki, me te whakatautika i o rātau whakaaro:</p> <p>$123 = 124$ $176 - 88 = 88 - 176$ $56 = 36 + 20$ $38 + 20 = 58 + 7$ $24 + 39 = 25 + 38$ $52 - 18 = 53 - 19$</p> <p>Whakamahia ngā tūmahi rerenga tau pono, hē hoki, tuwhera hoki hei mahana puta noa i te tau.</p> <p>1. Ka tīmata pea ngā ākongā mā te whakaatu i ngā mōhiotanga. Ka taea tēnei te whakamahi hei whakatū i ngā ākongā hei</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	<p>whakaae/whakakore.</p> <p>2. Ka taea e ētahi ākonga te mahi i tētahi taha, ā, ko tētahi kia ōrite ki te tau kotahi. Heoi anō, ko te arotahi matua ko te whakatū i ngā ākonga hei whakamahi i ngā pātahitanga puta noa i te tohu ōrite.</p> <ul style="list-style-type: none"> • Ka aro atu ki ngā ākonga e whakamahi ana i ngā momo whakaaro pānga me te whakamōhio i ngā rerenga tau me ngā pere hei miramira i tēnei.
<p>Rapanga Motuhake</p>	<p>He pono, he hē rānei ēnei rerenga tau? Whakatautikatia tō whakaaro.</p> $254 = 264 - 10$ $78 - 4 - 3 = 78 - 7$ $126 + 48 = 127 + 49$ $572 = 572$ $276 + 49 = 278 + 47$ <p>Tuhia ō ake rerenga tau pono, hē hoki.</p>
<p>Ma te kaiako</p>	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 8</p>	<p>Kimihia ngā tau ngaro:</p> $41 - 18 = _ - 16$ $164 - 128 = 165 - _$ $_ - 125 = 162 - 115$ $181 - _ = 183 - 39$
<p>WHakaaro matua o te Ao Pangarau</p>	<p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua nga rahinga e ōrite ana ki te nuinga tuatoru kotahi e ōrite ana ki a rāua anō.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki. • Ngā Wharite me ngā Panga Tau 5 • tuhi me te whakaoti whārite pono, whārite parau rānei, whārite whānui hoki e whai wāhi mai ana ngā pāheko e whā: h.t., $674 + 56 - k = 671$. •
<p>Whaingā Ako:Ka ako nga mokopuna ki te:</p>	<p>Whakamārama me te whakatautika i ngā pātahitanga i waenga i ngā tau i roto i te whārite. Whakaoti i ngā raruraru ōrite me te whakamārama me te whakatautika i ngā rongoā.</p>
<p>Mathematical language</p>	<p>Tohu ōrite, pātahitanga, rerekētanga, tāpiri, tango.</p>
<p>Wa Toha me te Hono</p>	<p>Tīpakohia ngā ākonga hei tiritiri nāna i whakamahi i tētahi rautaki pānga hei kimi i te tau ngaro. Whakamōhiohia ngā whārite mā ngā pere.</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	<p>Hono:</p> <p>Tono atu ki ngā ākonga kia kitea ngā tau ngaro mā te kimi i te pātahitanga puta noa i te tohu ōrite me te whakaatu i tēnei mā te whakamahi pere.</p> <p>$146 - 28 = 136 - \underline{\quad}$</p> <p>$\underline{\quad} - 77 = 192 - 177$</p>
<p>Hei Awhina i te kaiako</p>	<p>1. Kia mōhio koe he rerekē te raupapa aronga i waenga i te tāpiritanga me te mahiroto me ngā ākonga i a koe e mahi ana i tua atu i te tāpiritanga me tētahi rongoā hē pēnei i te $41 - 18 = 43 - 16$. Ko te tikanga o tētahi matapakinga ki ngā ākonga kia kite i te rerekētanga i waenga i ngā rerenga tau tuwhera me te tāpiritanga me te mahiroto (hei tauira, ko te tāpiritanga ko tētahi whakaritenga o +1, -1 i te wā e pā ana te mahiroto ki tētahi whakaritenga o +1, +1, -1 rānei, -1).</p> <p>1. Ka taea e ētahi ākonga te mahi i tētahi taha, ā, ko tētahi kia ōrite ki te tau kotahi. Heoi anō, ko te arotahi matua ko te whakatū i ngā ākonga hei whakamahi i ngā pātahitanga puta noa i te tohu ōrite.</p> <ul style="list-style-type: none"> • Ka aro atu ki ngā ākonga e whakamahi ana i ngā momo whakaaro pānga me te whakamōhio i ngā rerenga tau me ngā pere hei miramira i tēnei.
<p>Rapanga Motuhake</p>	<p>Kimihia ngā tau ngaro:</p> <p>$24 + 17 = \underline{\quad} + 18$</p> <p>$\underline{\quad} + 125 = 187 + 115$</p> <p>$52 - \underline{\quad} = 53 - 19$</p> <p>$63 - 47 = 68 - \underline{\quad}$</p> <p>$177 + 289 = \underline{\quad} + 189$</p> <p>$\underline{\quad} - 87 = 351 - 187$</p> <p>Whakamahia ngā pere hei whakaatu i ō whakaaro.</p>
<p>Ma te kaiako</p>	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 9</p>	<p>Ka whakaoti a Maryssa i te $5489 + 2276 = 7765$</p> <p>Ka whakaoti a Maryssa i te $5489 + 2276 = 7765$ $2276 + 5489 =$</p> <p>$7765 - 2276 =$</p> <p>$7765 - 5489 =$</p> <p>Ka titiro a Maryssa ki nga whārite, a, e kī ana kua mōhio kē a ia ki nga whakautu me te kore whakaoti i a rātau.</p> <p>He aha nga tauira e whakaaro ana koe i kitea e Maryssa?</p> <p>E mahi tonu ana ēnei tauira i ngā wā katoa?</p> <p>Tuhia ō ake huinga whārite ki te tāpiritanga me te tangohia e whakamahi ana i ngā tauira ōrite.</p>
<p>WHakaaro matua o te Ao Pangarau</p>	<p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki. • Ngā Wharite me ngā Panga Tau 5 • tuhi me te whakaoti whārite pono, whārite parau rānei, whārite whānui hoki e whai wāhi mai ana ngā pāheko e whā: h.t., $674 + 56 - k = 671$. •
<p>Whaingā Ako:Ka ako nga mokopuna ki te:</p>	<p>Whakamārama me te whakatautika i te āhuatanga kōaro.</p> <p>Whakamārama me te whakatautika i te pātahitanga kōaro o te tāpiritanga me te mahiroto.</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

Mathematical language	He āhuatanga kōaro, he pātahitanga kōaro, he ahuwānuitanga, tāpiritanga, tangohia.
Connect	<p>Tīpakohia ngā rautaki rongoā ākongā e āta whakamārama ana ki te āhuatanga kōaro me te pātahitanga kōaro o te tāpiritanga me te mahiroto, kaua e tatau i ngā whakautu. Miramira ki ngā ākongā kāore e hiahia ana koe ki te tatau, engari ka taea te whakamahi pātahitanga hei whakatika i ngā whārite rerekē. Pātai atu ki ngā ākongā kia whakaaro mēnā ka mahi tonu tēnei, ā, ki te kore e mahi.</p> <p>Hei tauira:</p> $23 + 18 = 41$ $23 - 41 \neq 18$ <p>Connect:</p> <p>Ina $a + b = c$</p> <p>Ka taea e koe te tuhi kia toru 'mēnā, ā,' ngā whārite tāpiri me ngā whāriteroto e pono ana</p>
Hei Awhina i te kaiako	<ol style="list-style-type: none"> He mahi kōaro te tāpiritanga me te tango. <ul style="list-style-type: none"> E hiahia ana ētahi ākongā ki te tatau whakautu, tautokona kia kimi pātahitanga me ngā tūhononga puta noa i ngā mahi.
Rapanga Motuhake	<p>Kimihia ngā tau e ngaro ana:</p> $1131 - _ = 1012$ $_ + 577 = 1691$ $525 = _ + _$ $631 = _ - _$ $64 + 39 = _ + 37$ $154 - _ = 156 - 89$
Ma te kaiako	

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Rapanga 10	<p>Ka whakaoti a Sima i $48 + 27 + 55 = 130$</p> <p>Kātahi ka tono tōna kaiako ki a ia kia whakaoti i te $27 + 55 + 48 =$</p> <p>E kī ana a Sima kua mōhio kē a ia ki te whakautu.</p> <ol style="list-style-type: none"> 1. He pēhea tana mōhio? 2. Ki tōu whakaaro ka mahi tēnei mō ngā tau katoa? Ki te pērā, me pēhea koe e mōhio ai? 3. Tuhia ō ake tauira ki ētahi atu tau e mahi ai tēnei pātahitanga. <ol style="list-style-type: none"> a) Ka mahi tēnei me ētahi atu mahi (tango, whakarea, wehenga)?
WHakaaro matua o te Ao Pangarau	<p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p>
Nga tini mata o te Marautanga	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki. • Ngā Wharite me ngā Panga Tau 5 • tuhi me te whakaoti whārite pono, whārite parau rānei, whārite whānui hoki e whai wāhi mai ana ngā pāheko e whā: <p style="margin-left: 20px;">h.t., $674 + 56 - k = 671$.</p> •
Whaingā Ako:Ka ako nga mokopuna ki te:	<p>Whakamārama me te whakatautika i te āhuatanga herekore.</p> <p>Ko nga whakaaro e pā ana ki te whakamahi rawa.</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

Mathematical language	Āhuatanga herekore, Tāiringa kōrero, whanuitanga, tauira.
Wa Toha me te Hono	<p>Tīpakohia ngā rautaki rongoa ākongā e hanga ana i tētahi whakatikatanga me te whakamāramatanga o te āhuatanga ā-ture me te kore whakaoti i te mahi. Pātai atu ki ngā ākongā kia whakaaro mēnā ka mahi tonu tēnei mō ia momo tau (hei tauira, ngā tau nui, ngā hautanga, ērā atu mea).</p> <p>Hono:</p> <p>Pātai atu ki ngā ākongā kia tohu i tō rātou āhuatanga ki ngā kupu, he hoahoa (tauira ōkiko rānei), me te whakamahi i ngā tāupe (hei tauira., $a + b + c = c + a + b = b + a + c$). Tautoko i ngā ākongā ki te whakapai i te whakaaro e mahi ana rātau i ngā kupu kia mahi rā anō hei whakamāramatanga mo te āhuatanga herekore.</p>
Hei Awhina i te kaiako	<ol style="list-style-type: none"> 1. E hiahia ana ētahi ākongā ki te tatau whakautu, tautoko i a rātou ki te kimi pātahitanga me ngā tūhononga puta noa i ngā mahi, kua e mahi i tētahi tatauranga. 2. Tohuāki i ngā ākongā kia tūhura mēnā ka mahi ā rātou whakaaro ki ngā momo tau rerekē (ngā mea nui ake, ngā mea iti iho tae atu ki ngā hautanga, ērā atu mea). 3. I roto i te tūhono, tonoa ngā ākongā kia whakamahi i ngā momo rauemi raima rerekē hei hanga i ngā tauira hei tautoko i a rātou ki te hanga i tētahi whakatika raima mō tō rātou whakaaro. <ul style="list-style-type: none"> • E wātea ana hei whakamahi: pepa mātiti, kupiki hono-maha, ngā kaikaute, ngā papa-papa, me ngā rākau paraka hukapapa.
Rapanga Motuhake	<p>He pono te rerenga tau e whai ake nei:</p> $72 - 57 = 15$ $72 - 57 - 8 = 15 - 8 \text{ pono, hē rānei?}$ $72 - 57 + 36 = 15 + 34 \text{ pono, hē rānei?}$ <p>I pēhea koe i mōhio?</p> <ol style="list-style-type: none"> 1. Ki tōu whakaaro ka mahi tēnei mō ētahi atu tau? Ka taea e koe te whakamārama he aha, he aha rānei kāore? <ol style="list-style-type: none"> b) Ka taea e koe te tuhi ō ake tauira ki ētahi atu tau e mahi ai tēnei pātahitanga?
Ma te kaiako	

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 11</p>	<p>Whakaoti ēnei:</p> $2342 + 5335 =$ $675 + 1835 =$ $3978 + 2413 =$
<p>WHakaaro matua o te Ao Pangarau</p>	<p>Ka whakamahia ngā tau hei whakaingoa i ngā rahinga tauwhāiti. Ka taea te whakawātea i ngā tau ki ngā wāhanga i roto i ngā huarahi kāore e taea te huri i te nuinga.</p> <p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p> <p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua nga rahinga e ōrite ana ki te nuinga tuatoru kotahi e ōrite ana ki a rāua anō.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki. • Ngā Wharite me ngā Panga Tau 5 • tuhi me te whakaoti whārite pono, whārite parau rānei, whārite whānui hoki e whai wāhi mai ana ngā pāheko e whā: <ul style="list-style-type: none"> h.t., $674 + 56 - k = 671$. •
<p>Whaingā Ako:Ka ako nga mokopuna ki te:</p>	<p>Whakamahia te uara wāhi hei whakatika i ngā raruraru tāpiri.</p> <p>Whakamahia te bridging ki te tekau tau tata rawa hei whakatika i ngā raruraru tāpiri</p> <p>Whakamahia te ōritetanga me te utu hei whakatika i ngā raruraru tāpiri.</p> <p>E whakaatu ana i te whakaaro mā te whakamahi i tētahi raina tau me te</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

	tuhipoka.
Nga Tini mata o te Reo Pangarau	E hia mano, he rau, tekau, he mea tāpiri, he tango.
Wa Toha me te Hono	<p>Tīpakohia ngā rautaki rongoā ākongā i whakamahia ai e rātou te uara wāhi (tae atu ki tētahi whare uara-wāhi) hei tāpiri, hei whakamahi rānei i te ōritetanga me te utu.</p> <p>Hono:</p> <p>Pātai atu ki ngā ākongā kia whakaahua me pēhea tō whakatika i ngā whārite e whai ake nei mā te uara wāhi me te hono ki tētahi whare uara wāhi:</p> <p>$4245 + 3633 =$</p> <p>$5489 + 2574 =$</p>
Hei Awhina i te kaiako	<ol style="list-style-type: none"> 1. Kia wātea ngā rauemi raima mēnā e hiahiaitia ana e ngā ākongā hei tīpako (hei tauira, kāri pere, ngā tāpare tekau kua tā kētia, he moni i roto i te \$100, \$10, me ngā tuhipoka \$1). 2. Me mōhio ki ngā ākongā e tāpiri ana i ngā tau mā te whakamahi i te uara wāhi me te āwhina i a rātou ki te tūhono ki te whare uara wāhi. 3. Me mōhio ki ngā ākongā e tāpiri ana i ngā tau mā te whakawhāiti ki te tekau tau tata rawa. 4. E mōhio ana ki ngā ākongā e whakamahi ana i te ōritetanga me te utu. <ul style="list-style-type: none"> • E tūmanako ana ngā ākongā kia tohu mā te whakamahi whārite, te whare uara wāhi, me te raina tau wātea.
Rapanga Motuhake	<p>Whakaotia ngā raruraru o raro nei me te whakamahi i tētahi whare uara wāhi, ngā whārite me tētahi raina tau wātea hei whakaatu me pēhea tō whakaoti:</p> <p>$3164 + 4524 =$</p> <p>$4721 + 4158 =$</p> <p>$1976 + 228 =$</p> <p>$631 + 1899 =$</p>
Ma te kaiako	

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

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Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

<p>Rapanga 12</p>	<p>Whakaoti ēnei:</p> $4876 - 3653 =$ $2451 - 439 =$ $6784 - 4669 =$
<p>WHakaaro matua o te Ao Pangarau</p>	<p>Ka whakamahia ngā tau hei whakaingoa i ngā rahinga tauwhāiti. Ka taea te whakawātea i ngā tau ki ngā wāhanga i roto i ngā huarahi kāore e taea te huri i te nuinga.</p> <p>Tērā ētahi āhuatanga tauhanga e whakaahua ana i te tāpiritanga me te whakarea hei mahi. Ko ēnei te āhuatanga kōaro, ā-waha, ā-waha, me ngā āhuatanga tuakiri. He pātahitanga kōaro tō te tāpiritanga me te whakarea me te whakareatanga me te wehenga.</p> <p>E whakaatu ana ngā whārite i ngā pātahitanga o te ōritetanga i waenganui i ngā wāhanga i ia taha o te tohu ōrite. Ko ngā āhuatanga o te ōritetanga ko: Mēnā ka tāpirihia, ka whakaritea rānei te tau tūturu ōrite ki ngā taha e rua o tētahi whārite, ka pupuritia te ōritetanga; Mēnā ka whakanuia, ka wehea rānei ngā taha e rua o tētahi whārite e te tau tūturu ōrite (kāore e whakawehea e te 0), ka pupuritia te ōritetanga; E rua nga rahinga e ōrite ana ki te nuinga tuatoru kotahi e ōrite ana ki a rāua anō.</p>
<p>Nga tini mata o te Marautanga</p>	<p>Te Hanga o ngā tau Tau 4</p> <ul style="list-style-type: none"> • tatau whakamua, whakamuri ki te 1,000 • tautohu, te pānui, te tuhi, te whakatairite me te whakaraupapa tau ki te 10,000 • taurea o te 25, te 50 me te 100. • tautohu i te tikanga o ngā mati i te uara tū o ngā tau ki te 10,000. • whakaputa i te maha o ngā 10, o ngā 100, o ngā 1,000 kei roto i tētahi tau mati-4. • Nga Pāheko • whakamahi whakaāwhiwhi me te whakatau tata • whakaāwhiwhi tauoti ki te 10, 100 me te 1000 pātata • whakaāwhiwhi i ngā hautekau ki te tauoti pātata. • tāpiri me te tango tau mati-2, tau mati-3 hoki. • Ngā Wharite me ngā Panga Tau 5 • tuhi me te whakaoti whārite pono, whārite parau rānei, whārite whānui hoki e whai wāhi mai ana ngā pāheko e whā: h.t., $674 + 56 - k = 671$. •
<p>Whaingā Ako: Ka ako nga mokopuna ki te:ā mokopuna ki te:</p>	<p>Whakamahia te tango i ngā wāhanga o ngā rapanga tango.</p> <p>Whakamahia te ōritetanga me te utu hei whakatika i ngā raruraru tango.</p> <p>E whakaatu ana i te whakaaro mā te whakamahi i tētahi raina tau me te tuhipoka.</p>

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

Nga Tini mata o te Reo Pangarau	He rau, tekau, he mea tāpiri, he tango.
Wa Toha me te Hono	<p>Tīpakohia ngā rautaki rongoa ākongā i whakaritea ai mō te uara wāhi tuatahi mā te whakamahi i te uara wāhi, ā, ka whakaatu i tēnei ki tētahi whare uara wāhi, mō te tuarua me te tuatoru rānei i roto i ngā wāhanga, i whakamahia rānei te ōritetanga me te utu. Whakaaturia tēnei ki ngā whārite me tētahi raina tau wātea.</p> <p>Hono:</p> <p>Pātai atu ki ngā ākongā kia whakaahua me pēhea tō whakaoti i ngā whārite e whai ake nei mā tētahi whare uara wāhi:</p> <p>5946 – 4835 =</p> <p>9867 – 549 =</p>
Hei Awhina i te kaiako	<ol style="list-style-type: none"> 1. Homai he rawa hei āwhina i ngā ākongā e hiahia ana. 2. Kimihia ngā ākongā e whakamahi ana i te uara wāhi me te whakaaturanga uara wāhi hei whakaiti i ngā tau. 3. Tirohia ngā ākongā e whakaiti ana i ngā tau mā te whakawhāiti ki te tekau tau tata rawa. 4. Kimihia ngā ākongā e whakamahi ana i te whakatata me te tauwhiti. <ul style="list-style-type: none"> • Tatari kia tohu ngā ākongā mā te whakamahi i tētahi whare uara wāhi, te raina tau wātea me ngā whārite.
Rapanga Motuhake	<p>Tīpakohia tētahi, ētahi rānei o ngā tūmahi aromatawai e whai ake nei (kua āpitihia ki te mutunga o te tuinga) hei hohenga takitahi:</p> <p>N1A: Ngā rapanga tāpiri me te tango hei whakaoti.</p> <p>N1AB: Ngā rapanga tāpiri me te mahiroto hei whakaoti.</p> <p>N3A: Ngā Āhuetanga o ngā tau me ngā mahi.</p> <p>N3AB: Ngā Āhuetanga o ngā tau me ngā mahi.</p>
Ma te kaiako	

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DMIC

DEVELOPING MATHEMATICAL INQUIRY COMMUNITIES ASSESSMENT TASK

NUMBER - ADD / SUB: LEVEL 2 Rapanga N1A

E 27 nga whakapiripiri o Hōria i roto i tana kohinga. He rau tōna me ētahi atu whakapiripiri e 38. E hia nga whakapiripiri kai a Hōria? Whakatika me te whakatautika i tō whakautu.

Kai te tākaro māpere a Hamuera. E 53 māpere tōna, engari e 25 māpere i roto i te kēmu. E hia nga māpere kai a Hamuera ināiane? Whakatika me te whakatautika i tō whakautu.

E 243 nga piro i whiwhi ai te tīma whutupōro o Tatiana i te tau. E 86 nga piro i riro i a rātau i te tīma panuku i te rōpū. He aha te tapeke o te tīma panuku? Whakatika me te whakatautika i tō whakautu.

Level 2 – Year 4 Teacher Booklet: Tau me te Taurangi

Tuhia tētahi, ētahi rānei o ngā rapanga kupu mō tētahi hoa e whai ana i te tāpiritanga, te tangohia rānei. Whakaatu me pēhea tō whakaoti.

DMIC

DEVELOPING MATHEMATICAL INQUIRY COMMUNITIES ASSESSMENT TASK

NUMBER - ADD / SUB: LEVEL 2 Rapanga N1AB (Parallel Rapangas)

E 38 nga pere o Mele. Ka kitea e ia he pēke me ētahi atu pere e 24. E hia ngā pere kai a Mele katoa? Whakatika me te whakatautika i tō whakautu.

Kai te kohikohi anga a Timo. E 62 ōna anga, a, e 27 nga anga ki tōna tuahine. E hia ngā anga kei a Timo ināianei? Whakatika me te whakatautika i tō whakautu.

E 224 nga piro i whiwhi ai te tīma poipōro o Lily i te tau. E 87 nga piro i riro i a rātau i te tīma panuku i te rōpū. He aha te tapeke o te tīma panuku? Whakatika me te whakatautika i tō whakautu.

Tuhia tētahi, ētahi raruraru kupu rānei mō tētahi hoa e pā ana ki te tāpiritanga, te tango rānei. Whakaatu me pēhea tō whakaoti.

DMIC

DEVELOPING MATHEMATICAL INQUIRY COMMUNITIES ASSESSMENT TASKS

NUMBER - PATTERNS: LEVEL 2 Rapanga N3A

$65 + 38$

$89 + 26$

$17 + 45 + 23$

11×7

$38 + 65$

$77 \div 7$

$90 + 25$

$11 + 11 + 11 + 11 + 11 + 11 + 11$

$20 + 30$

7×11

$50 - 20$

$23 + 17 + 45$

Tirohia ngā rerenga tau o runga ake nei.

1. Whakaahuatia he aha ngā tauira ka kitea e koe
2. He aha i mahi ai ō tauira?
3. Kai te mahi rātau me ētahi atu tau?

DMIC

DEVELOPING MATHEMATICAL INQUIRY COMMUNITIES ASSESSMENT TASKS

NUMBER - PATTERNS: LEVEL 2 Rapanga N3AB (Parallel Rapanga)

$19 + 67 + 52$

7×5

$78 + 44$

$40 + 30$

$35 \div 7$

$168 + 287$

$79 + 43$

$67 + 52 + 19$

$7 + 7 + 7 + 7 + 7$

5×7

$287 + 168$

$70 - 40$

Tirohia ngā rerenga tau o runga ake nei.

1. Whakaahuatia he aha ngā tauira ka kitea e koe
2. He aha i mahi ai ō tauira?
3. Kai te mahi rātau me ētahi atu tau?