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| **Te Panuku o ngā Kaupae: 0 – 1** | | **Te Rautaki Paheko: Te Tāpiri me te Tango** | | |
| Ngā Whāinga Paetae: **Te Tau, Taumata 1**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   1.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–100: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te 5 me ngā tauhono; ngā tauhono o te 10; te 10 me ngā tauhono; ngā tau ngahuru; te maha o ngā tekau me ngā tahi kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  1.3 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau māmā, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite. | | | | |
| **Te Mātauranga** | | | **Ngā Rauemi e Hāngai ana** | |
| E mōhio ana ki ngā tohutau mai i te 0 ki te 10. | | | *TPT, Pukapuka 4:*  • Whāriki Tohutau (wh.28)  • Anga Tekau (wh.30)  • Kōwhiuwhiu Tau (wh.36)  *Ngā Rauemi o te BSM:*  2-1-23, 2-1-41, 2-1-42, 2-1-82, 2-3-6, 2-3-82, 3-1-7, 3-1-23, 3-3-6, 3-3-7, 3-3-46, 4-1-3, 4-1-4, 4-1-6, 4-1-43, 4-1-46, 4-1-49, 4-1-50, 4-1-82, 4-1-83, 4-3-8,  4-3-9 | |
| Ka whakahua i te raupapa whakamua, whakamuri hoki o ngā tau, 0–10. | | | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Whakaaturia ki te Rārangi Tau (wh.18)  *Ngā Rauemi o te BSM:*  2-1-1, 2-1-2, 2-1-4, 2-1-21, 2-1-84, 2-3-8, 2-3-24, 3-1-2, 3-1-21, 3-1-22, 3-3-22, 4-1-48 | |
| Ka kōrero i te tau ki mua, ki muri hoki i tētahi tau (0–10). | | |  | |
| Ka raupapa i ngā tau, 0–10. | | |  | |
| Ka mōhio ki ngā tauira o te rima (pērā i ngā tauira matimati). | | | *TPT, Pukapuka 4:*  • Takirima (wh.76) | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | | **Ngā Rauemi e Hāngai ana** |
| Ka tatauria te maha o ngā mea o roto i tētahi huinga (1–10). | E hia ngā mea kei konei ..?  3, 6, 5, 9, 4, 8, 10, 7  E hia katoa ngā mea kei konei ..? (kia rua ngā huinga)  2 me te 1  3 me te 2  1 me te 4  3 me te 3  5 me te 2  2 me te 2  5 me te 5  3 me te 4 | | | *TPT, Pukapuka 5:*  • He Aha te Tohutau? (wh.12)  • Kia Rite! (wh.13)  • Tatau Haere (wh.14)  • Oro Whakataka (wh.15)  • Tokohia? (wh.16)  • Kia Kaha, kia Mārire (wh,17)  • Tārere (wh.18)  • Ki Mua, ki Muri (wh.19)  • Pakipaki (wh.20)  • Hīkoia ngā Tau (wh.21)  • Raupapahia 1 (wh.22)  • Pīroria te Mataono Tau (wh.24)  • E Hia? (wh.25)  *Ngā Rauemi o te BSM:*  2-1-5, 3-1-3, 3-1-4, 3-1-5, 3-1-44, 3-1-45, 3-1-46, 3-1-47, 3-1-48,  3-1-49, 3-1-82, 3-3-48, 3-3-49, 4-1-23, 4-3-21, 4-3-44, 4-3-46, 5-1-7. |
| Ka hangaia tētahi huinga (1–10). | Whakarōpūngia, kia [3] ngā porotiti ki konei ...  3, 5, 10, 7, 4, 8, 6, 11, 13 | | | *TPT, Pukapuka 5:*  • Waewae Anuhe (wh.26)  • He Raupua (wh.27)  • Whāngaia te Arewhana (wh.28)  • Keke Huritau (wh.29)  • Uhia te Honu (wh.30)  • Ki te Tekau (wh.31) |

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| **Te Panuku o ngā Kaupae: 1 – 2** | | **Te Rautaki Paheko: Te Tāpiri me te Tango** | |
| Ngā Whāinga Paetae: **Te Tau, Taumata 1**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   1.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–100: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te 5 me ngā tauhono; ngā tauhono o te 10; te 10 me ngā tauhono; ngā tau ngahuru; te maha o ngā tekau me ngā tahi kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  1.3 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau māmā, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite. | | | |
| **Te Mātauranga** | **Ngā Rauemi e Hāngai ana** | | |
| Ka tautuhia ngā tau katoa, 0–20. | *TPT, Pukapuka 4:*  • Whāriki Tohutau (wh.28) | | |
| Ka mōhio ki ngā tauira tau (0–10), pērā i ngā tauira matimati me ngā tauira o te anga tekau. | *TPT, Pukapuka 4:*  • Takirima (wh.76) | | |
| Ka whakahuatia te raupapatanga tau whakamua, whakamuri hoki, 0–20. | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Whakaaturia ki te Rārangi Tau (wh.18)  *Ngā Rauemi o te BSM:*  4-1-22, 4-3-23, 4-3-24, 4-3-25, 4-3-44, 4-3-45, 4-3-46, 4-3-47, 4-3-48,  4-3-51, 4-3-81, 4-3-84, 5-1-6, 5-1-7, 5-1-8, 5-1-21, 5-1-22, 5-1-23,  5-1-42, 5-1-43, 5-1-45, 5-1-45, 5-1-46, 5-1-47, 5-1-82, 5-1-83, 5-3-4,  5-3-5, 5-3-7, 5-3-8, 5-3-22, 5-3-23, 5-3-45, 5-3-46, 5-3-49, 5-3-50,  5-3-52, 5-3-53, 5-3-54, 5-3-55, 5-3-82, 5-3-84, 6-1-21, 6-1-5, 6-1-6,  6-1-7, 6-1-42, 6-1-44, 6-1-45, 6-1-46, 6-1-81, 6-1-82, 6-3-3, 7-1-1,  7-1-41, 7-1-81, 7-3-4, 10-3-7, 10-3-48, 10-3-49, 10-3-50, 10-3-51 | | |
| Ka raupapahia ngā tau, 0–20. | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Whakaaturia ki te Rārangi Tau (wh.18)  *Ngā Rauemi o te BSM:*  7-1-2, 7-1-3, 7-1-43, 7-1-44, 7-1-45, 7-1-46, 7-1-82 | | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka tatauria ngā mea katoa o ngā huinga taonga ōkiko hei whakaoti tāpiritanga, tangohanga hoki (ki te 10). | 2 + 3 = 5  1 + 4 = 5  3 + 4 = 7  5 + 5 = 10  2 + 5 = 7  6 + 3 = 9  8 + 5 = 13  9 + 6 = 15 | | *TPT, Pukapuka 5:*  • Porotiti Tāpiri, Porotiti Tango (wh.34)  • He Tāpiri, he Tango Matimati (wh.36)  • Ngaku Pī Huripoki (wh.40) |

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| Ka whakamahia he taonga ōkiko hei whakaoti rapanga tango, mā te wāwāhi huinga, me te tatau (0–20). | 4– 2 = 2  6 – 4 = 2  5 – 4 = 1  7 – 3 = 4  9 – 5 = 4  8 – 6 = 2  12 – 3 = 9  15 – 5 = 10 | *TPT, Pukapuka 5:*  • He Tau Māmā te Rima (wh.41)  • Whakawhitia ngā Ringaringa (wh.43)  • Tekau mā Hia ngā Matimati? (wh.45)  *Ngā Rauemi o te BSM:*  4-1-5, 4-3-5, 4-3-6, 4-3-21, 4-4-22,  4-3-44, 4-3-46, 4-3-84, 5-1-3, 5-1-5,  5-1-41, 5-3-6, 5-3-48, 5-3-83, 6-1-2,  6-1-3, 6-1-4, 6-1-9, 6-1-43, 6-1-47,  7-1-42 |
| Ka whakarōpūngia ngā tekau, hei tatau i ngā huinga taonga ōkiko (ki te 50). | 17 = 1 te tekau me ngā tahi e 7  25 = e 2 ngā tekau me ngā tahi e 5  32 = e 3 ngā tekau me ngā tahi e 2  49 = e 4 ngā tekau me ngā tahi e 9 | *TPT, Pukapuka 5:*  • Ngā Rōpū o te Tekau (wh.46) |

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| **Te Panuku o ngā Kaupae: 2 – 3** | | **Te Rautaki Paheko: Te Tāpiri me te Tango** | |
| Ngā Whāinga Paetae: **Te Tau, Taumata 1**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   1.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–100: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te 5 me ngā tauhono; ngā tauhono o te 10; te 10 me ngā tauhono; ngā tau ngahuru; te maha o ngā tekau me ngā tahi kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  1.3 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau māmā, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite. | | | |
| **Te Mātauranga** | **Ngā Rauemi e Hāngai ana** | | |
| Ka tautuhia ngā tau katoa, 0–20. | *Ngā Rauemi o te BSM:*  2-1-5, 6-1-7, 6-1-9, 6-3-2, 6-3-3, 6-3-4, 6-3-5, 6-3-6, 6-3-7, 6-3-22,  6-3-43, 6-3-44, 63-45, 6-3-46, 6-3-49, 6-3-50, 6-3-81, 6-3-83, 7-1-1,  7-1-2, 7-1-41, 7-1-42, 7-1-43, 7-3-4, 7-3-9, 7-3-45, 7-4-46, 8-1-4, 8-1-43,  8-1-44, 8-1-53, 11-1-6, 11-1-47, 11-1-82 | | |
| Ka whakahuatia te raupapatanga tau whakamua, whakamuri hoki, 0–20. | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Whakaaturia ki te Rārangi Tau (wh.18) | | |
| Ka raupapahia ngā tau, 0–20. | *Ngā Rauemi o te BSM:*  7-1-4, 7-1-5, 7-1-46, 7-1-48, 7-1-81, 7-1-82, 7-3-3, 7-3-44, 8-1-6, 8-3-3,  8-3-4, 8-3-5, 8-3-44, 8-3-45, 8-3-46 | | |
| Ka mōhio ki ngā meka tāpiritanga, tangohanga hoki ki te 5 me ngā meka rearua ki te 10. | *Ngā Rauemi o te BSM:*  7-1-49, 7-1-50, 7-1-51, 7-1-83, 8-1-5, 8-1-7, 8-1-46, 8-1-47, 8-1-48,  8-1-49, 8-1-82, 9-1-6, 9-1-12, 9-1-13, 9-1-43, 9-1-44, 9-1-50, 9-1-51,  9-1-52, 9-1-53, 9-1-54, 9-1-85, 9-1-86 | | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka tatau ā-hinengaro i ngā mea katoa o ngā huinga e rua e tāpiria ana (ki te 20). | 4 + 3 = ☐  5 + 2 = ☐  6 + 1 = ☐  8 + 4 = ☐  2 + 6 = ☐  3 + 7 = ☐  8 + 5 = ☐  16 + 2 = ☐ | | *TPT, Pukapuka 5:*  • Te Ringa Kotahi (wh.49)  • Te Anga Tekau (wh.51)  • Ngā Ringa e Rua (wh.52)  • He Matimati Maha (wh.59)  • Kawea ki te Rima, ki Tua atu (wh.63)  *Ngā Rauemi o te BSM:*  6-1-9, 6-1-46, 6-1-47, 6-1-81, 6-1-82,  6-3-7, 6-3-8, 6-3-49, 6-3-82, 6-3-84,  7-1-6, 7-1-52, 7-1-53, 7-1-84, 7-1-85,  7-3-4, 7-3-7, 7-3-50, 7-3-51, 7-3-52,  7-3-82, 8-1-5, 8-1-9, 8-1-51, 8-1-52,  8-1-83, 8-1-84, 8-3-7, 8-3-9, 8-3-50,  8-3-51, 10-1-3, 10-1-42, 10-1-82,  11-1-10, 11-1-11, 11-1-54, 11-1-55,  11-1-56, 11-1-85 |

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| Ka tatau ā-hinengaro hei whakaoti rapanga tango, tae atu ki te 20 hei tau tīmatanga. | 5 – 3 = ☐  6 – 2 = ☐  8 – 4 = ☐  10 – 3 = ☐  12 – 5 = ☐  15 – 3 = ☐  18 – 4 = ☐  13 – 4 = ☐ | *TPT, Pukapuka 5:*  • Te Ringa Kotahi (wh.49)  • Te Anga Tekau (wh.51)  • Ngā Ringa e Rua (wh.52)  • Te Whakaahua ā-Hinengaro me te Anga Tekau (wh.54)  • E Hia kei te Huna? (wh.58)  • He Matimati Maha (wh.59)  • Kawea ki te Rima, ki Tua atu (wh.63)  *Ngā Rauemi o te BSM:*  8-1-10, 8-1-53, 8-1-85, 8-3-8, 8-3-9, 9-1-14, 9-1-15, 9-1-16, 9-1-55,  9-1-56, 10-1-2, 10-1-41, 10-1-81 |
| Ka tatau ā-hinengaro i ngā tau ngahuru hei whakaoti rapanga tāpiri, rapanga tango hoki. | 2 + 2 = ☐, nō reira, 20 + 20 = ☐  5 + 5 = ☐, nō reira, 50 + 50 = ☐  3 + 4 = ☐, nō reira, 30 + 40 = ☐  5 – 3 = ☐, nō reira, 50 – 30 = ☐  8 – 4 = ☐, nō reira, 80 – 40 = ☐ | *TPT, Pukapuka 5:*  • Tekau ngā Rare ki te Pākete Kotahi (wh.65) |

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| **Te Panuku o ngā Kaupae: 2 – 3** | | **Te Rautaki Paheko: Te Pānga Riterite** | |
| Ngā Whāinga Paetae: **Te Tau, Taumata 1**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   1.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–100: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te 5 me ngā tauhono; ngā tauhono o te 10; te 10 me ngā tauhono; ngā tau ngahuru; te maha o ngā tekau me ngā tahi kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  1.3 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau māmā, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite. | | | |
| **Te Mātauranga** | | | |
| Ka mōhio ki te tikanga o ngā kupu e pā ana ki te hautau, pērā i te wāhanga ōrite, te tohatoha ōrite, te rahinga ōrite, te haurua, te hauwhā, ākene ko te hauwaru hoki.  Hei kimi i ngā hautanga āhua: te poikere, te ngaku pepa, te porowhita, te tapawhā hāngai, te pouaka …  Hei kimi i ngā hautanga inenga: te ngaku pepa (roa), te ipu wai (rōrahi), te papa o te tēpu (horahanga) …  Hei kimi i te hautanga huinga: te huinga porotiti, te huinga kōhatu … | | | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka mahi ā-ringa ki te whiriwhiri i te haurua me te hauwhā o ētahi āhua, o ētahi inenga rānei. Hei tauira:  • ko te o tētahi porowhita;  • ko te o tētahi ipu wai.  Ka whiriwhiri i te haurua me te hauwhā o ngā huinga taonga, tae atu ki te 20. | Whakaarohia ētahi āhua, ētahi inenga, ētahi taonga rānei hei kimi mā ngā ākonga i ngā haurua me ngā hauwhā.  Whakawhitiwhiti kōrero mō te hangarite, te ōrite o ngā wāhanga, me te ōrite o te tohatoha.  Mā te pouako e tuhi ngā tohu mō te haurua me te hauwhā (ākene pea ko te hauwaru hoki) me te whakamārama i te tikanga o te taurunga me te tauraro. | | *TPT, Pukapuka 7:*  • Tohatoha Ōrite (wh.16)  *Ngā Rauemi o te BSM:*  6-2-9, 6-2-48, 7-2-7, 7-2-48,  7-2-49, 7-2-82, 8-2-8, 8-2-47,  9-2-48, 8-2-83, 8-3-6, 8-3-47,  8-3-49, 8-3-82 |

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| **Te Panuku o ngā Kaupae: 3 – 4** | | | **Te Rautaki Paheko: Te Tāpiri me te Tango** | | |
| Ngā Whāinga Paetae: **Te Tau, Taumata 1**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   1.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–100: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te 5 me ngā tauhono; ngā tauhono o te 10; te 10 me ngā tauhono; ngā tau ngahuru; te maha o ngā tekau me ngā tahi kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  1.3 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau māmā, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite. | | | | | |
| **Te Mātauranga** | | | **Ngā Rauemi e Hāngai ana** | | |
| Ka tautuhia ngā tau katoa, 0–100. | | | *TPT, Pukapuka 4:*  • Whāriki Tohutau (wh.28)  • Ngā Tauhono me te Tekau, ngā Tau Ngahuru (wh.32)  *Ngā Rauemi o te BSM:*  8-1-45, 8-1-81, 9-1-4, 9-1-5, 9-1-6, 9-1-42, 9-1-82,  12-1-1 | | |
| Ka whakahuatia te raupapatanga tau whakamua, whakamuri hoki, 0–100, me te mōhio ki te hononga o te tatau, ki te tāpiri, ki te tango rānei i te tahi. | | | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Te Tau ki Mua, te Tau ki Muri (wh.13)  • Tātaitai (wh.15)  • Te Paparau me te Pukamano (wh.21)  • Kōwhiuwhiu Tau (wh.36)  *Ngā Rauemi o te BSM:* 9-1-4, 9-1-42, 9-3-9 | | |
| Ka raupapahia ngā tau, 0–100. | | | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Kāri Pere (wh.11)  • Raupapahia (wh.17)  • Whakaaturia ki te Rārangi Tau (wh.18)  • He Aha te Tau? (wh.19)  • He Aho Pirepire (wh.23)  • Te Tau Nui Rawa Atu (wh.25)  *Ngā Rauemi o te BSM:*  9-3-51, 9-3-52, 10-1-4, 11-1-4, 11-1-5, 11-1-43,  11-1-44, 11-1-45, 11-1-46, 11-3-6, 11-3-7, 11-3-46,  11-3-47, 11-3-48, 11-3-83 | | |
| Ka mōhio ki ngā meka tāpiritanga, tangohanga hoki ki te 5 me ngā meka rearua ki te 10. | | |  | | |
| E mōhio ana ki te pūmau o te maha o ngā mea i tētahi huinga, ahakoa te āhua o te noho o aua mea. | | |  | | |
| Ka mōhio ki ngā meka tāpiritanga ki te 10, me ngā tauhono o te 10. Hei tauira:  3 + 7 = 10, 10 – 6 = 4, 10 + 8 = 18 | | | *TPT, Pukapuka 4:*  • Ki te Tekau (wh.100)  • He Anga Tekau (wh.107)  • Ngā Tauhono o te Tekau (wh.109)  • Whārite Tāpiritanga (wh.115)  *Ngā Rauemi o te BSM:*  9-1-9, 9-1-10, 9-1-47, 9-1-48, 9-3-11, 9-3-12, 9-3-54, 10-1-3, 10-3-46, 11-3-8, 11-3-9, 11-3-49, 11-3-50, 11-3-51 | | |
| Ka mōhio ki ngā tau rearua ki te 20, pērā i te  7 + 7 = 14. | | | *TPT, Pukapuka 4:*  • Rearua (wh.102)  *Ngā Rauemi o te BSM:* 10-1-6, 10-1-47, 10-1-48,  10-1-83 | | |
| Ka mōhio ki ngā tekau kei roto i tētahi tau ngahuru. | | | *TPT, Pukapuka 4:*  • Huria te Tau (wh.87)  • Honohono Tau (wh.106)  *Ngā Rauemi o te BSM:*  9-1-9, 9-1-10, 9-1-47, 9-1-48, 10-1-5, 10-1-45,  10-1-46, 11-1-12 | | |
| Ka mōhio ki ngā tauhono ngahuru o te 100. | | | *Ngā Rauemi o te BSM:* 9-3-8, 9-3-49, 9-3-50 | | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | | **Ngā Rauemi e Hāngai ana** | |
| Ka tatau ake ā-hinengaro hei whakaoti tāpiritanga (ki te 100):  • te whiriwhiri i te otinga  36 + 7 = ☐  • te whiriwhiri i te tau  tīmatanga ☐ + 6 = 81  • te whiriwhiri i te tau tāpiri  25 + ☐ = 33 | 9 + 2 = ☐  8 + 4 = ☐  14 + 3 = ☐  25 + 4 = ☐  99 + 5 = ☐  77 + 4 = ☐  8 + ☐ = 11  15 + ☐ = 19  67 + ☐ = 72  89 + ☐ = 96  E hia te rahinga ake o te 14 i te 8?  E hia te rahinga ake o te 33 i te 27?  E hia te rahinga ake o te 74 i te 69? | | | *TPT, Pukapuka 5:*  • Papariki Tau (wh.67)  • Ngaku Tau (wh.69)  • Ruku Pāua (wh.71)  • Poraka Pekepeke (wh.73)  • Tatau ake i te Tau Nui (wh.76)  • Tatau ake (wh.78)  *Ngā Rauemi o te BSM:*  7-1-53, 9-1-11, 9-1-49, 10-1-7,  10-1-49, 10-1-50, 10-1-51 | |
| Ka tatau ā-hinengaro whakamuri hei whakaoti rapanga tango, tae atu ki te 100 hei tau tīmatanga. | 12 – 3 = ☐  14 – 5= ☐  23 – 4 = ☐  41 – 2 = ☐  67 – 5 = ☐  72 – 6 = ☐  12 – ☐ = 9  24 – ☐ = 19  67 – ☐ = 58  94 – ☐ = 89  E hia te itinga ake o te 16 i te 21?  E hia te itinga ake o te 39 i te 43?  E hia te itinga ake o te 74 i te 80? | | | *TPT, Pukapuka 5:*  • Tatau Whakamuri (wh.80)  *Ngā Rauemi o te BSM:*  9-3-13, 9-3-14, 9-3-55, 9-3-56,  9-3-57, 9-3-58, 9-3-59, 9-3-85,  10-1-8, 10-1-52, 10-1-53 | |
| Ka whakamahi rauemi uara tū hei whakaoti rapanga tāpiri, rapanga tango hoki e whai wāhi mai ana ngā rōpū o te tekau. | | 40 + 20 = ☐  70 – 50 = ☐  60 + 30 = ☐  90 – 20 = ☐  42 + 30 = ☐  75 – 20 = ☐  54 – ☐ = 24  27 + ☐ = 57  36 + ☐ = 76  94 – ☐ = 54 | | | *TPT, Pukapuka 5:*  • Tāpiria he Tau Ngahuru (wh.82)  • Tangohia he Tau Ngahuru (wh.84)  • Ngā Tekau me ngā Tahi e Ngaro ana (wh.93)  • Te Pukamano (wh.95) |

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| **Te Panuku o ngā Kaupae: 3 – 4** | | **Te Rautaki Paheko: Te Whakarea me te Whakawehe** | |
| Ngā Whāinga Paetae: Te Tau, **Taumata 1**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   1.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–100: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te 5 me ngā tauhono; ngā tauhono o te 10; te 10 me ngā tauhono; ngā tau ngahuru; te maha o ngā tekau me ngā tahi kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  1.3 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau māmā, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite. | | | |
| **Te Mātauranga** | | **Ngā Rauemi e Hāngai ana** | |
| Ka whakahuatia te raupapatanga tatau whakamua, whakamuri hoki, mawhiti-rua, mawhiti-rima, mawhiti-tekau (0–100). | | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Ararā! (wh.9)  • Tātaitai (wh.15)  *Ngā Rauemi o te BSM:*  • 10-1-4, 10-1-44, 10-1-43 | |
| Ka whakaputa wawe i ngā rōpū o te rua kei roto i ngā tau, tae atu ki te 20. | | *TPT, Pukapuka 4:*  • Ararā! (wh.9)  *Ngā Rauemi o te BSM:*  8-1-8, 8-1-50, 9-3-10, 9-3-53 | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka tatau mawhiti-rua, mawhiti-rima, mawhiti-tekau hei whakaoti rapanga whakarea. | 2 × 4 → 2, 4, 6, 8  2 × 7 → 2, 4, 6, 8, 10, 12, 14  5 × 3 → 5, 10, 15  5 × 8 → 5, 10, 15, 20, 25, 30, 35, 40  10 × 6 → 10, 20, 30, 40, 50, 60  4 × 5 → 2, 4, 6, 8, 10, 12, 14, 16, 18, 20  4 × 5 → 5, 10, 15, 20 | | *TPT, Pukapuka 6:*  • He Ngaku Tau (wh.14)  *Ngā Rauemi o te BSM:*  11-3-54, 11-3-55 |
| Ka whakaoti rapanga whakawehe mā te tohatoha ōrite i ngā rōpū o te tahi, o te rua me te rima. | 10 ÷ 2 = 5  20 ÷ 4 = 5  14 ÷ 2 = 7  9 ÷ 3 = 3  12 ÷ 4 = 3  15 ÷ 3 = 5  25 ÷ 5 = 5  16 ÷ 4 = 4 | | *TPT, Pukapuka 6:*  • Mā te Rua, mā te Rima, mā te Tekau (wh.35) |

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| **Te Panuku o ngā Kaupae: 3 – 4** | **Te Rautaki Paheko: Te Pānga Riterite** | |
| Ngā Whāinga Paetae: **Te Tau, Taumata 1**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   1.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–100: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te 5 me ngā tauhono; ngā tauhono o te 10; te 10 me ngā tauhono; ngā tau ngahuru; te maha o ngā tekau me ngā tahi kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  1.2 Ka mōhio ki ngā hautau māmā, pērā i ngā haurua me ngā hauwhā: te tuhi i ngā tohu hautau; te tikanga o te taurunga me te tauraro; te raupapa hautau māmā; te whakatauira i te hautau (pērā i te hurihanga ).  1.3 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau māmā, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite. | | |
| **Te Mātauranga** | | **Ngā Rauemi e Hāngai ana** |
| Ka mōhio ki te tikanga o ngā kupu e pā ana ki te hautau, pērā i te wāhanga ōrite, te tohatoha ōrite, te rahinga ōrite, te taurunga, te tauraro, te haurua, te hauwhā, ā, ka whakawhānuihia ake ki ngā hauwaru, ngā hau-tekau mā ono, ngā hautekau, ngā hautoru, ngā haurima me ngā hauono.  Hei kimi i ngā hautanga āhua:  te poikere, te ngaku pepa, te porowhita, te tapawhā hāngai, te pouaka …  Hei kimi i ngā hautanga inenga:  te ngaku pepa (roa), te ipu wai (rōrahi), te papa o te tēpu (horahanga) …  Hei kimi i te hautanga huinga: te huinga porotiti, te huinga kōhatu … | |  |
| Ka mōhio ki ngā tohu mō ngā haurua, ngā hauwhā, ngā hautoru me ngā haurima. | | *TPT, Pukapuka 4:*  • He Wehenga Hautanga (wh.54)  • Te Hautau ki te Papa Tīrau 1 (wh.56)  *Ngā Rauemi o te BSM:*  9-2-18, 9-2-61, 9-2-85, 11-2-59 |
| Ka mōhio ki ngā tau rearua, tae atu ki te 20. Hei tauira, 7 + 7 = 14. | | *TPT, Pukapuka 4:*  • Rearua (wh.102)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • He Ringa Āwhina (wh.3)  *Ngā Rauemi o te BSM:*  10-1-6, 10-1-47, 10-1-48, 10-1-83 |

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| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | **Ngā Rauemi e Hāngai ana** |
| Ka whiriwhiri i ngā hautanga mama o ngā āhua me ngā inenga roa.  Ko ngā haurua me ngā hauwhā i te tuatahi, kātahi ka whānui haere ki ngā hauwaru, ngā hautoru, ngā haurima me ngā hautekau. | Whakaarohia ētahi āhua, ētahi inenga, ētahi taonga rānei hei kimi mā ngā ākonga i ngā haurua me ngā hauwhā.  Whakawhitiwhiti kōrero mō te hangarite, te ōrite o ngā wāhanga me te ōrite o te tohatoha.  Ka tuhia ngā tohu mō te haurua me te hauwhā, me te whakamārama i te tikanga o te taurunga me te tauraro.  Ka whakawhānuihia ngā mahi kia whai wāhi mai ngā hauwaru, ngā hautoru, ngā haurima me ngā hautekau. | *TPT, Pukapuka 7:*  • Tohatoha Ōrite (wh.16)  *Ngā Rauemi o te BSM:*  9-2-4, 9-2-5, 9-2-45, 9-2-18, 9-2-61,  9-2-85, 10-2-16, 11-1-18, 11-1-59,  11-2-59, 12-2-3, 12-2-4, 12-2-9,  12-2-15, 12-2-44, 12-2-45, 12-2-50, 12-2-51, 12-2-81, 12-2-7, 12-3-49, 12-3-50, 12-3-51, 12-3-83, 12-3-84 |
| Ka whiriwhiria te hautanga o tētahi huinga mā te tohatoha ōrite.  Ka whakawhānuihia tēnei rautaki kia whai wāhi mai te tatau māwhitiwhiti me te whakaahua ā-hinengaro. Ka aro ki ngā haurua me ngā hauwhā i te tuatahi, kātahi ki ngā hauwaru, ngā hautoru, ngā haurima me ngā hautekau. | o te 14 = ☐  o te 12 = ☐  o te 24 = ☐  o te 15 = ☐  o te 20 = ☐ | *TPT, Pukapuka 7:*  • Ngā kōrero whakataki mō te Kaupae 3-4 (wh.15)  • Tohatoha Ōrite (wh.16)  *Ngā Rauemi o te BSM:*  9-3-10, 9-3-53, 11-2-18 |

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| **Te Panuku o ngā Kaupae: 4 – 5** | | **Te Rautaki Paheko: Te Tāpiri me te Tango** |
| **Ngā Whāinga Paetae: Te Tau, Taumata 2**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   2.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te maha o ngā tahi, ngā tekau me ngā rau kei roto i tētahi tau;  te rahi me te hanga o tētahi tau; ngā tikanga o te taurua me te taukehe.  2.2 (Mātauranga Tau)  Ka mōhio ki ngā rearua tae atu ki te 20 me ngā haurua e whai pānga ana.  2.4 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki wāwāhi tau tāpiripiri māmā.  2.5 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | | |
| **Te Mātauranga** | **Ngā Rauemi e Hāngai ana** | |
| Ka tautuhia ngā tau katoa, 0–1,000. | *TPT, Pukapuka 4:*  • Kōwhiuwhiu Tau (wh.36)  • He Whare Uara Tū (wh.38) | |
| Ka whakahuatia te raupapatanga tau whakamua, whakamuri hoki, 0–1,000, me te mōhio ki te tatau mawhiti-10, mawhiti–100.  Ka whakahuatia te tau, he kotahi, he tekau, he rau rānei, te nui ake, te iti ake rānei. | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Tatau Māwhitiwhiti i te Rārangi Tau (wh.8)  • Te Tau ki Mua, te Tau ki Muri (wh.13)  • Tātaitai (wh.15)  • Kōwhiuwhiu Tau (wh.36)  *Ngā Rauemi o te BSM:*  10-3-9, 10-3-55, 10-3-56, 12-3-3, 12-3-4, 12-3-81,  12-3-82  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua,*  *Taumata 2:*  • Kei te Kōwhiuwhiu te Whakaatu (wh.2) | |
| Ka raupapahia ngā tau 0–1,000. | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Kāri Pere (wh.11)  • Raupapahia (wh.17)  • Whakaaturia ki te Rārangi Tau (wh.18)  • He Aha te Tau? (wh.19)  • Te Paparau me te Pukamano (wh.21)  • He Aho Pirepire (wh.23)  • Te Tau Nui Rawa Atu (wh.25)  *Ngā Rauemi o te BSM:*  10-3-86, 11-3-3, 11-3-42 | |

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| Ka mōhio ki ngā rōpū o roto i te rau, pērā i te 49 me te 51, me te tino aro ki ngā taurea o te 5, pērā i te 25 me te 75. | | *TPT, Pukapuka 4:*  • Piki ake, Heke iho (wh.83)  • Huria te Tau (wh.87)  *Ngā Rauemi o te BSM:*  11-3-4, 11-3-5, 11-3-43, 11-3-44, 11-3-45, 11-3-81,  11-3-82, 12-1-1, 12-1-2, 12-1-41, 12-1-82, 12-1-83  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi,*  *Taumata 2:*  • Kei Tēnā Anō Tana Tikanga (wh.2)  • Ko Meka Mīharo (wh.6)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua,*  *Taumata 2:*  • He Koura Kōritorito (wh.3)  • Kia Eke ki te 100 (wh.4)  • Te Peke Pāmamao (wh.12) | |
| Ka mōhio ki te maha o ngā rōpū o te 10 kei roto i tētahi tau mati-toru. | | *TPT, Pukapuka 4:*  • Anga Pirepire (wh.79)  • He Tau Matirua (wh.80) | |
| Ka mōhio ki ngā meka tāpiritanga me ngā meka tangohanga ki te 20. | | *TPT, Pukapuka 4:*  • Honohono Tau (wh.106)  • He Anga Tekau (wh.107)  • Aho Pirepire (wh.110)  • Raupapatanga Meka Matua (wh.111)  • He Ara Paheko Tau (wh.114)  • Whārite Tāpiritanga (wh.115)  *Ngā Rauemi o te BSM:*  9-3-6, 9-3-7, 9-3-48, 9-3-83, 9-3-84, 10-3-6, 10-3-8, 10-3-10, 10-3-46, 10-3-47, 10-3-52, 10-3-53, 10-3-54,  11-1-8, 11-1-9, 11-1-52, 11-1-53, 11-1-83, 11-1-84,  11-3-52, 11-3-53, 11-3-84, 12-1-7, 12-1-52, 12-1-85,  12-3-2, 12-3-45, 12-3-46, 12-3-47, 12-3-8, 12-3-52,  12-3-53, 12-3-85  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi,*  *Taumata 2:*  • Te Whakataetae Poraka (wh.22)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • Tāpiri Tere (wh.3)  • Tāpirihia (wh.6)  • Rua Tekau mā Whitu (wh.15)  • Kia Ū, Kia Tika (wh.19)  • Tūhono Tapatoru (wh.21)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • Kia Tere Ake, kia Tika Ake (wh.2)  • Me Tāpiri, me Tango Rānei (wh.5)  • Kia Whā ki te Rārangi (wh.7)  • Whāia te Mahere Huānga (wh.8)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Heke Haere (wh.9) | |
| Ka mōhio ki ngā tekau me ngā rau kei roto i tētahi tau matirua, tau matitoru hoki. | | *TPT, Pukapuka 4:*  • E Pātata ana ki te 100 (wh.82)  • Whakawhitia ngā Paparanga Uara Tū (wh.88) | |
| Ka whakaawhiwhia ngā tau matitoru ki te tekau, ki te rau rānei e pātata ana. | | *Ngā Rauemi o te BSM:*  12-1-6, 12-1-4 | |
| Ka mōhio ki ngā tau rau takirua ka eke ki te 1,000 te tapeke, pērā i te 400 me te 600. | | *Ngā Rauemi o te BSM:*  12-1-3, 12-1-4, 12-1-42, 12-1-43 | |
| Ka tuhia he pikitia, he whārite hoki hei whakaatu i ngā whiriwhiringa tāpiritanga. | | *TPT, Pukapuka 4:*  • E Pātata ana ki te 100 (wh.82) | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka whakamahi tau rearua hei whakaoti rapanga tāpiri, rapanga tango hoki. | 3 + 3 = ☐, nō reira, 4 + 3 = ☐  7 + 7 = ☐, nō reira, 7 + 8 = ☐,  6 + 7 = ☐, 14 – 7 = ☐  8 + 8 = ☐, nō reira, 16 – 7 = ☐, 16 – 9 = ☐, 15 – 8 = ☐  25 + 25 = ☐, nō reira, 26 + 27 = ☐,  23 + 27 = ☐, 50 – 24 = ☐  500 + 500 = ☐, nō reira,  503 + 501 = ☐, 498 + 497 = ☐, 501 – 498 = ☐ | | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • He Ringa Āwhina (wh.3)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Kāore Tērā e Tika Ana! (wh.15) |
| Ka whakamahi i ngā rōpū o te rima hei whakaoti rapanga tāpiri, rapanga tango hoki. | 5 + 3 = ☐, nō reira, 4 + 5 = ☐  5 + 5 = ☐, nō reira, 5 + 6 = ☐, 6 + 7 = ☐, 7 + 8 = ☐  9 – 5 = ☐, nō reira, 19 – 5 = ☐, 6 + 7 + 5 + 7 = ☐  25 + 25 = ☐, nō reira, 26 + 27 = ☐, 24 + 26 = ☐  50 + 50 = ☐, nō reira, 46 + 47= ☐ | | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Ngā Meka Matimati (wh.8)  • Kia Eke ki te Tapeke Tika (wh.11) |
| Ka whakamahi taurata hei whakaoti rapanga tāpiri. | 4 + 6 = ☐, nō reira, 4 + 6 + 4 + 6 = ☐  7 + 3 = ☐, nō reira, 7 + 5 + 5 + 3 = ☐  8 + 4 + 6 + 3 + 2 + 7 = ☐  2 + 4 + 9 + 6 = ☐  3 + 8 + 6 + 7 + 2 + 4 = ☐  50 + 40 + 60 + 50 + 30 = ☐  4 + 17 + 26 + 3 + 8 = ☐ | | *TPT, Pukapuka 5:*  • Ki te Tekau (wh.96)  • Raupapatanga Paheko Māmā (wh.98) |
| Ka whakamahia te rautaki ‘kawea ake ki te tekau’ hei whakaoti rapanga tāpiri. | 9 + 6 → 10 + 5 = ☐  6 + 8 → 4 + 10 = ☐  18 + 7 → 20 + 5 = ☐  59 + 8 → 60 + 7 = ☐  6 + 87 → 3 + 90 = ☐  97 + 6 → 100 + 3 = ☐  38 + 298 → 36 + 300 = ☐ | | *TPT, Pukapuka 5:*  • Whakawhitia te Ngahuru (wh.103)  • Wāwāhia, ka Tāpiri ai (wh.108)  *Ngā Rauemi o te BSM:*  12-1-50, 12-1-51, 12-1-89  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Ngā Huarahi Tatau (wh.10)  • Ka Eke Atu, ka Heke Mai (wh.14)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • He Kararehe Rerekē (wh.1)  • He Kohikohi Kāroti (wh.6)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:*  • He Pūtoi (wh.1)  • Ngā Porotiti Pekepeke (wh.4)  • Kia Eke ki te Tekau (wh.11)  • Ngā Tapeke Mata (wh.18) |
| Ka whakamahia te rautaki ‘wāwāhi uara tū’, hei whakaoti rapanga tāpiri, rapanga tango hoki. | 30 + 40 = ☐, nō reira, 34 + 42 = ☐  50 + 40 = ☐, nō reira, 53 + 43 = ☐, 45 + 55 = ☐  60 – 30 = ☐, nō reira, 64 – 32 = ☐  80 – 50 = ☐, nō reira, 84 – 51 = ☐, 88 – 54 = ☐  30 + 20 + 40 = ☐, nō reira,  32 + 25 + 41 = ☐ | | *TPT, Pukapuka 5:*  • Tāpiria he Tau Ngahuru (wh.82)  • Tangohia he Tau Ngahuru (wh.84)  • Tāpiria ngā Tekau me ngā Tahi (wh.87)  • Tangohia ngā Tekau me ngā Tahi (wh.90)  • Ngā Tekau me ngā Tahi e Ngaro ana (wh.93)  • Te Pukamano (wh.95)  *Ngā Rauemi o te BSM:*  12-1-9, 12-1-55, 12-1-56, 12-1-86, 12-1-88  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • Whakatakataka (wh.4)  • E Hia te Pakeke? (wh.5)  • Ko Meka Mīharo (wh.6)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • He Whaiwhai Taniwha (wh.7)  • Te Peke Pāmamao (wh.12)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Te Whakamahi Tau (wh.2)  • Piki Haere (wh.8) |

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| **Te Panuku o ngā Kaupae: 4 – 5** | **Te Rautaki Paheko: Te Whakarea me te Whakawehe** | |
| **Ngā Whāinga Paetae: Te Tau, Taumata 2**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   2.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te maha o ngā tahi, ngā tekau me ngā rau kei roto i tētahi tau;  te rahi me te hanga o tētahi tau; ngā tikanga o te taurua me te taukehe.  2.2 (Mātauranga Tau)  Ka mōhio ki ngā rearua tae atu ki te 20 me ngā haurua e whai pānga ana.  2.4 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki wāwāhi tau tāpiripiri māmā.  2.5 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga.  **Ngā Whāinga Paetae: Te Tau, Taumata 3**  3.1 (Mātauranga Tau)  Ka mōhio ki ngā meka matua mō te tāpiri, te tango me te whakarea.  3.3 (Mātauranga Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira me te ōrau: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki tāpiripiri; rautaki whakarea māmā. | | |
| **Te Mātauranga** | | **Ngā Rauemi e Hāngai ana** |
| Ka whakahuatia te raupapatanga tatau whakamua, whakamuri hoki, mawhiti-rua, mawhiti-toru, mawhiti-rima, mawhiti-tekau (0–1,000). | | *TPT, Pukapuka 4:*  • Tatauria (wh.6)  • Tatau Māwhitiwhiti i te Rārangi Tau (wh.8)  • Tātaitai (wh.15)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Ka Pai te Peke Haere (wh.16)  *Ngā Rauemi o te BSM:*  1-3-12, 11-3-13, 11-3-54, 11-3-55, 11-3-85, 12-3-13 |
| Ka whakaputa wawe i ngā rōpū o te 2 kei roto i ngā tau ki te 20; ngā rōpū o te 5 kei roto i ngā tau ki te 50; ngā rōpū o te 10 kei roto i ngā tau ki te 100. | | *TPT, Pukapuka 4:*  • Tatau Māwhitiwhiti i te Rārangi Tau (wh.8)  • Ararā! (wh.9)  • Takirima (wh.76)  • Whakawhitia ngā Paparanga Uara Tū (wh.88)  *Ngā Rauemi o te BSM:*  9-1-7, 9-1-8, 9-1-45, 9-1-46, 9-1-83, 9-1-84, 12-1-5,  12-1-44, 12-1-45, 12-1-8 |
| Ka whakaputa wawe i ngā meka whakarea, whakawehe hoki mō te 2, te 5 me te 10. | | *TPT, Pukapuka 4:*  • Raupapatanga Meka Matua (wh.111)  • Whiriwhiria te Paheko (wh.112)  • Whārite Whakareatanga (wh.118) |

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| Ka tuhia he pikitia, he whārite hoki hei whakaatu i ngā whiriwhiringa ā-hinengaro mō ngā rapanga whakarea, whakawehe hoki. | | *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • Kua Pau te Wā (wh.8)  • He Rā, He Āporo Anō (wh.9) | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka whakaoti rapanga whakarea, mā te tāpiri tāruarua. | 2 × 6 = ☐, nō reira, 3 × 6 = ☐  4 × 5 = ☐, nō reira, 5 × 5 = ☐,  6 × 5 = ☐  5 × 8 = ☐, nō reira, 6 × 8 = ☐,  7 × 8 = ☐  10 × 4 = ☐, nō reira, 11 × 4 = ☐,  12 × 4 = ☐ | | *TPT, Pukapuka 6:*  • Whakareatia ki te Toru (wh.21)  • Tūtohi Tukutuku Kararehe (wh.25)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • He Wīra, he Waewae (wh.12)  • Te Rāhui Poaka (wh.13)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Ki te Hokohoko! (wh.16)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • He Rā, He Āporo Anō (wh.9)  • Piri ki te Huarahi (wh.10)    *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • Te Tatau Hipi (wh.16) |
| Ka whakamahia te rautaki ‘te rearua me te haurua’ hei whakaoti whakareatanga ki te 5. | 2 × 10 = ☐, nō reira, 4 × 5 = ☐    4 × 10 = ☐, nō reira, 8 × 5 = ☐, 6 × 5 = ☐    3 × 10 = ☐, nō reira, 6 × 5 = ☐, 7 × 5 = ☐    4 × 5 = ☐, nō reira, 5 × 5 = ☐    8 × 5 = ☐, nō reira, 9 × 5 = ☐ | | *TPT, Pukapuka 6:*  • Mā te Rua, mā te Rima, mā te Tekau (wh.35)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Whakarea ki te Rua (wh.18) |
| Ka whakamahia te ‘āhuatanga tātai kōaro’ hei whakaoti whakareatanga. Hei tauira:  4 × 6 = 6 × 4 | 5 × 6 = ☐→ 6 × 5 = ☐    9 × 2 = ☐→ 2 × 9 = ☐    10 × 7 = ☐→ 7 × 10 = ☐    100 × 6 = ☐→ 6 × 100 = ☐    50 × 2 = ☐→ 2 × 50 = ☐= | | *TPT, Pukapuka 6:*  • Tūtohi Tukutuku Kararehe (wh.25)  • Te Huri Kōaro i te Whakareatanga (wh.58)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • He Tiakarete Tapawhā (wh.10) |
| Ka whakamahia te rautaki ‘tohatoha ōrite’ hei whakaoti whakawehenga, me te tāpiritanga hei matapae i te otinga. | 10 ÷ 2 = ☐, nō reira, 20 ÷ 4 = ☐    12 ÷ 2 = ☐, nō reira, 12 ÷ 4 = ☐    16 ÷ 2 = ☐, nō reira, 16 ÷ 4 = ☐, 16 ÷ 8 = ☐    100 ÷ 2 = ☐, nō reira, 100 ÷ 4 = ☐ | | *TPT, Pukapuka 6:*  • Tohaina kia Ōrite (wh.29)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Ngā Moko Tuauri (wh.19) |
| Ka whakaoti rapanga whakawehe mā te hanga rōpū ōrite. | 2 × ☐ = 20, nō reira, 4 × ☐ = 20    10 × ☐ = 30, nō reira, 5 × ☐ = 30    2 × ☐ = 16, nō reira, 4 × ☐ = 16    5 × ☐ = 30, nō reira, 5 × ☐ = 60    4 × ☐ = 16, nō reira, 8 × ☐ = 16    4 × ☐ = 12, nō reira, 4 × ☐ = 24 | | *TPT, Pukapuka 6:*  • Poraka Honohono (wh.32)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Ngā Moko Tuauri (wh.19) |

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| **Te Panuku o ngā Kaupae: 4 – 5** | | | **Te Rautaki Paheko: Te Pānga Riterite** | |
| **Ngā Whāinga Paetae: Te Tau, Taumata 2**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   2.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te maha o ngā tahi, ngā tekau me ngā rau kei roto i tētahi tau; te rahi me te hanga o tētahi tau; ngā tikanga o te taurua me te taukehe.  2.2 (Mātauranga Tau)  Ka mōhio ki ngā rearua tae atu ki te 20 me ngā haurua e whai pānga ana.  2.3 (Mātauranga Tau)  Ka mōhio ki ngā hautau (pērā i ngā haurua, ngā hautoru, ngā hauwhā, ngā haurima me ngā hautekau: te tuhi i ngā tohu hautau; te tikanga o te taurunga me te tauraro o tētahi hautau; te raupapa hautau māmā me ngā hautau e ōrite ana te tauraro.  2.4 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki wāwāhi tau tāpiripiri māmā.  2.5 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | | | | |
| **Te Mātauranga** | | **Ngā Rauemi e Hāngai ana** | | |
| Ka mōhio ki ngā tohu hautau mō ngā haurua, ngā hautoru, ngā hauwhā, ngā haurima, me ngā hautekau, me te whai wāhi mai o ngā hautau nui ake i te tahi. | | *TPT, Pukapuka 4:*  • He Wehenga Hautanga (wh.54)  • Te Hautau ki te Papa Tīrau 1 (wh.56)  • Te Hautau ki te Papa Tīrau 2 (wh.58)  • Ngā Hautau Waetahi-kore (wh.59)  *He Tau Anō Te Tau:Te Tau, Pukapuka Tuatahi, Taumata 2:*  • Wānangahia ngā Wāhanga (wh.21)  *Ngā Rauemi o te BSM:*  12-3-51, 12-3-83, 12-3-84 | | |
| Ka raupapahia ngā hautau e ōrite ana te tauraro, pērā i te , te me te . | |  | | |
| Ngā Rautaki | Te Panuku o ngā Rapanga | | | Ngā Rauemi e Hāngai ana |
| Ka whakamahia ngā meka tāpiritanga me ngā tau rearua hei whiriwhiri i te hautau waetahi o tētahi huinga. Hei tauira:  o te 16 → 8 + 8 = 16, 4 + 4 = 8 | o te 8 = ☐  o te 12 = ☐  o te 20 = ☐  o te 24 = ☐  o te 15 = ☐  o te 25 = ☐ | | | *TPT, Pukapuka 7:*  • Ngā kōrero whakataki mō te Kaupae 4-5 (wh.23)  • Kararehe (wh.28)  • Manu Hiakai (wh.36)  *Ngā Rauemi o te BSM:*  12-3-49, 12-3-50  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • He Huripoki Hautau (wh.17)  • A Keri te Kurī (wh.19)  • He Reka ngā Kai (wh.20) |
|  |  | | | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:*  • Kia Manawareka te Katoa (wh.20)  • Te Kimi i ngā Hautau (wh.24)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Te Hautau Ka Mau (wh.21) |
| Ka whiriwhiria ngā hautanga waetahi o ngā āhua me ngā inenga roa, mā te whakahaurua. | Ka whiriwhiria te, te , te me te o tētahi porowhita, tapawhā hāngai, ngaku pepa …  Ka whiriwhiria te , te me te o tētahi tapawhā hāngai me tētahi ngaku pepa. | | | *TPT, Pukapuka 7:*  • Pihikete (wh.25)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • Wānangahia ngā Wāhanga (wh.21)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2–3:*  • Wāhanga Porohita (wh.17)  • Hautau Hirahira (wh.18)  • Pēpeke Pukukai (wh.19) |
| Ka raupapahia ngā hautau waetahi me ngā hautau e ōrite ana te tauraro, ka whakamāramatia hoki he aha i nui ake ai tētahi i tētahi. | Raupapahia ēnei hautau, ka whakamārama ai he aha i nui ake ai tētahi i tētahi:  te me te  te me te  te me te  te me te  te me te  te me te  te me te  te me te  te me te  te me te | | | *TPT, Pukapuka 7:*  • Hautanga Porowhita (wh.31) |
| Ka whakamahia he rauemi hei raupapa hautau, me te whai wāhi mai o ngā hautau nui ake i te tahi, pērā i te me te .  Ka whakamārama hoki i te tikanga o te taurunga me te tauraro. | Hangaia ēnei takirua hautau kia kitea ai ko tēhea te mea nui ake:  te me te  te me te  te me te  te me te  te me te  te me te | | | *TPT Pukapuka 7:*  • Hautanga Porowhita (wh.31) |
| **Te Panuku o ngā Kaupae: 5 – 6** | | | **Te Rautaki Paheko: Te Tāpiri me te Tango** | |
| **Ngā Whāinga Paetae: Te Tau, Taumata 2**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   2.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000: te whakaingoa i ngā tohutau; ngā raupapa tatauranga whakamua, whakamuri hoki; ngā tikanga uara tū; te maha o ngā tahi, ngā tekau me ngā rau kei roto i tētahi tau; te rahi me te hanga o tētahi tau; ngā tikanga o te taurua me te taukehe.  2.2 (Mātauranga Tau)  Ka mōhio ki ngā rearua tae atu ki te 20 me ngā haurua e whai pānga ana.  2.4 (Rautaki Tau)  Ka whakaoti rapanga e whai wāhi mai ana te tauoti me te hautau, ka whakamārama hoki i te rautaki: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki wāwāhi tau tāpiripiri māmā.  2.5 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga.  Ngā Whāinga Paetae: Te Tau, Taumata 3  3.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000,000: te whakaingoa i ngā tohutau; ngā momo raupapa tatauranga tauoti; ngā meka matua mō te tāpiri, te tango me te whakarea; te whakaawhiwhi tauoti, tau ā-ira hoki ki te 1, te 10, te 100 rānei e pātata ana; ngā tikanga uara tū o ngā tauoti me ngā tau ā-ira (kia 3 ngā mati ā-ira); te maha o ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  3.3 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira me te ōrau: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki tāpiripiri; rautaki whakarea māmā.  3.4 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | | | | |
| **Te Mātauranga** | | **Ngā Rauemi e Hāngai ana** | | |
| Ka tautuhia ngā tau katoa, 0–1,000,000. | | *TPT, Pukapuka 4*:  • Kāri Pere (wh.11)  • Kōwhiuwhiu Tau (wh.36)  • He Whare Uara Tū (wh.38) | | |
| Ka raupapahia ngā tauoti, 0–1,000,000. | | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Kāri Pere (wh.11)  • Raupapahia (wh.17)  • Whakaaturia ki te Rārangi Tau (wh.18)  • He Aha te Tau? (wh.19)  • Te Paparau me te Pukamano (wh.21)  • He Aho Pirepire (wh.23)  • Te Tau Nui Rawa Atu (wh.25)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • Kia Tika te Raupapa (wh.4) | | |

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| Ka pānui, ka raupapa tau ā-ira e whai wāhi mai ana he hautekau; ka tatau mawhiti-hautekau whakamua, whakamuri hoki. | | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Kāri Pere (wh.11)  • Raupapahia (wh.17)  • Whakaaturia ki te Rārangi Tau (wh.18)  • He Aha te Tau? (wh.19)  *Ngā Rauemi o te BSM:*  10-3-86, 11-3-3, 11-3-42 | |
| Ka mōhio ki ngā rōpū o roto i te mano, pērā i te 240 me te 760. | | *TPT, Pukapuka 4:*  • Whiriwhiria te Tau (wh.86)  • Huria te Tau (wh.87)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Ngā Tau Tapeke Pai (wh.1) | |
| Ka mōhio ki te maha o ngā rōpū o te 10 me te 100 kei roto i tētahi tau matiwhā. | | *TPT, Pukapuka 4:*  • E Pātata ana ki te 100 (wh.82)  • Whakawhitia ngā Paparanga Uara Tū (wh.88)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Te Whare Pūtea (wh.3)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Te Pēke Mimiti Kore (wh.1) | |
| Ka tuhia he pikitia, he whārite hoki hei whakaatu i ngā whiriwhiringa tāpiritanga, tangohanga hoki. | | *TPT, Pukapuka 4:*  • Aho Pirepire (wh.110) | |
| Ka whakaawhiwhia ngā tauoti ki te tekau, ki te rau, ki te mano rānei e pātata ana. | | *TPT, Pukapuka 4:*  • Whakaawhiwhia ki te Tekau (wh.94)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • Te Tauomaoma Hōiho (wh.23) | |
| Ka whakamahia te tuhinga ōkawa hei whakaoti tāpiritanga, tangohanga hoki. | | *TPT, Pukapuka 4:*  • E Pātata ana ki te 100 (wh.82)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Ki Wīwī ki Wāwā (wh.10)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Hei Aha te Tātaitai! (wh.13) | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka whakamahia te rautaki ‘hoki whakamuri ki te tau māmā’ hei whakaoti rapanga tango:  ko te whiriwhiri i te otinga, pērā i  te 65 – 8 = ☐;  ko te whiriwhiri i te tau tango,  pērā i te 65 – ☐ = 57;  ko te whiriwhiri i te tau  tīmatanga, pērā i te ☐ – 8 = 57. | 24 – 4 = ☐, nō reira, 24 – 6 = ☐  48 – 8 = ☐, nō reira, 48 – 9 = ☐  65 – 5 = ☐, nō reira, 65 – 8 = ☐  86 – 6 = ☐, nō reira, 86 – 9 = ☐  94 – 4 = ☐, nō reira, 94 – 8 = ☐  136 – 6 = ☐, nō reira, 136 – 8 = ☐  503 – 3 = ☐, nō reira, 503 – 8 = ☐ | | *TPT, Pukapuka 5:*  • Wāwāhia, Tangohia (wh.100)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • He Iwa, he Waru (wh.4)  • Me Tāpiri, me Tango Rānei (wh.5)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:*  • E Hoki ki te 10 (wh.14) |
| Ka whakaoti rapanga tango mā te tango i ngā mati uara tū. | 35 – 20 = ☐  78 – 50 = ☐  183 – 40 = ☐  236 – 50 = ☐  507 – 60 = ☐  913 – 130 = ☐  425 – 101 = ☐  873 – 502 = ☐  946 – 35 = ☐ | |  |
| Ka whakamahia te rautaki ‘wāwāhia ngā uara tū’ hei whakaoti rapanga tango. Hei tauira:  73 – 46 = 73 – 40 – 6 = 33 – 6 = 27 | 42 – 26 = ☐  82 – 45 = ☐  71 – 39 = ☐  123 – 57 = ☐  124 – 68 = ☐  272 – 93 = ☐  486 – 157= ☐  916 – 408 = ☐ | | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • Te Tawhiti o te Mawhiti (wh.8)  • Te Tiaki Manu (wh.11)  • Kimihia te Tau (wh.16)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • He Puke Pāhekeheke (wh.8) |
| Ka whakamahia te rautaki ‘te tau mama me te tikanga paremata’ hei whakaoti rapanga tāpiri. | 35 + 19 = ☐ → 34 + 20 = ☐  48 + 49 = ☐ → 50 + 50 - 3 = ☐  65 + 97 = ☐ → 62 + 100 = ☐  298 + 397= ☐ →300 + 400  – 5 = ☐  78 + 387 = ☐ → 65 + 400 = ☐  456 + 375 = ☐ → 431 + 400 = ☐ | | *TPT, Pukapuka 5:*  • Peke atu ki te Tau Māmā (wh.114)  • Peke atu ki Tua, ka Heke  Whakararo ai (wh.120) |
| Ka whakaoti rapanga tāpiri, rapanga tango hoki, mā te whakamahi taurata. | 43 + 37 = ☐  38 + 62 =☐  125 + 75 = ☐  45 + 255 = ☐  37 + 46 + 13 + 4 =☐  158 + 342 = ☐  25 + 81 + 34 + 19 + 75 + 66 = ☐  260 + 150 + 340 = ☐  333 + 444 + 555 + 666 = ☐ | | *TPT, Pukapuka 5*:  • E Pātata ana tētahi Tau Tāpiri ki te 100 (wh.127)  • Tangohia he Tau Māmā (wh.129)  • Tāpiritanga Ōrite (wh.131)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • Te Whaiwhai Toroa (wh.1) |
| Ka whakamahia te rautaki ‘huri kōaro’, hei whakaoti rapanga tango. Hei tauira:  72 – 45 = ☐ → 45 + ☐ = 72 | 43 – 39 = ☐ → 39 + ☐ = 43  83 – 76 = ☐ → 76 + ☐ = 83  91 – 68 = ☐ → 68 + ☐ = 91  203 – 187 = ☐ → 187 + ☐ = 203  783 – 395 = ☐ → 395 + ☐ = 783 | | *TPT, Pukapuka 5:*  • Paheko Kōaro (wh.117)  • Ngā Rapanga pēnei i te 67 – ☐ = 34 (wh.141)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • Whāia te Mahere Huānga (wh.8) |
| Ka whakamahia te tikanga o te whakawhiti uara tū hei whakaoti rapanga tāpiri, rapanga tango hoki, me te tirotiro anō ki te tuhinga ōkawa. | 46 + 38  93 – 57  537 + 429  714 – 267 | | *TPT, Pukapuka 5:*  • Te Tuhinga Ōkawa hei Whakaoti Tāpiritanga (wh.146)  • Te Tuhinga Ōkawa hei Whakaoti Tangohanga (wh.149) |
| Ka āta kōwhiria te rautaki ā-hinengaro e tino whaihua ana hei whakaoti rapanga tāpiri, rapanga tango hoki. | 65 + 79 = ☐  94 – 78 = ☐  345 + 656 = ☐  84 – 56 = ☐  603 – 287 = ☐  286 + ☐ = 942  ☐ – 429 = 831 | | *TPT, Pukapuka 5:*  • Hei Whakapakari i ngā Rautaki  ā-Hinengaro (wh.153) |

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| **Te Panuku o ngā Kaupae: 5 – 6** | **Te Rautaki Paheko: Te Whakarea me te Whakawehe** |
| **Ngā Whāinga Paetae: Te Tau, Taumata 3**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   3.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000,000: te whakaingoa i ngā tohutau; ngā momo raupapa tatauranga tauoti; ngā meka matua mō te tāpiri, te tango me te whakarea; te whakaawhiwhi tauoti, tau ā-ira hoki ki te 1, te 10 te 100 rānei e pātata ana; ngā tikanga uara tū o ngā tauoti me ngā tau ā-ira (kia 3 ngā mati ā-ira); te maha o ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  3.3 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira me te ōrau: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki tāpiripiri, rautaki whakarea māmā.  3.4 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | |
| **Te Mātauranga** | **Ngā Rauemi e Hāngai ana** |
| Ka mōhio ki ngā rōpū o te 2, o te 3, o te 5, me te 10 kei roto i ngā tau, tae atu ki te 100, me ngā toenga ka hua mai. | *TPT, Pukapuka 4:*  • Tatau Māwhitiwhiti i te Rārangi Tau (wh.8)  • Ararā! (wh.9)  • Tātaitai (wh.15)  • Te Whakarea hei Whakaoti Whakawehenga (wh.116) |
| Ka whakaputa wawe i ngā meka whakarea mō te 2, te 3, te 5 me te 10. | *TPT, Pukapuka 4:*  • Whiriwhiria te Paheko (wh.112)  • Whakareatia (wh.113)  • He Ara Paheko Tau (wh.114)  • Whārite Whakareatanga (wh.118)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • Hoki Ana ki te Kāinga (wh.11)  • Pū Ono (wh.24)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • Kei te Mataono te Kōrero (wh.20)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:*  • Te Tautuhi Tauwehe (wh.12)  • E Hia ngā Tauwehe? (wh.15)  • He Whakawhiti ki Kō (wh.16) |
| Ka mōhio ki ngā rōpū o te 10 me te 100 kei roto i tētahi tau matiwhā. | *TPT, Pukapuka 4:*  • Whakawhitia ngā Paparanga Uara Tū (wh.88) |
| Ka mōhio ki ngā meka pūrua, tae atu ki te 10 × 10 = 100. |  |
| Ka tuhia he whārite, he pikitia hoki hei whakaatu i ngā whiriwhiringa ā-hinengaro, hei whakaoti whakareatanga, whakawehenga hoki. |  |

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| Ngā Rautaki | Te Panuku o ngā Rapanga | Ngā Rauemi e Hāngai ana |
| Ka whakamahia te ‘āhuatanga tātai tohatoha’ me ngā meka whakarea mō te 5 hei whakaputa i ngā meka whakarea mō te 6, te 7, me te 4. | 2 × 5 = ☐, nō reira:  2 × 6 = ☐, 2 × 7 = ☐  4 × 5 = ☐, nō reira:  4 × 6 = ☐, 4 × 7 = ☐  6 × 5 = ☐, nō reira:  6 × 6 = ☐, 6 × 7 = ☐  9 × 5 = ☐, nō reira:  9 × 6 = ☐, 9 × 7 = ☐  20 × 5 = ☐, nō reira: 20 × 6 = ☐, 20 × 7 = ☐ | *TPT, Pukapuka 6:*  • Ngā kōrero whakataki mō te Kaupae 5–6 (wh.41)  • Whakareatia ki te Rima (wh.47)  • Parematatia (wh.54) |
| Ka whakamahia te ‘āhuatanga tātai tohatoha’ me ngā meka whakarea mō te 10 hei whakaputa i ngā meka whakarea mō te 9. | 10 × 2 = ☐, nō reira, 9 × 2 = ☐  10 × 9 = ☐, nō reira, 9 × 9 = ☐  10 × 6 = ☐, nō reira, 9 × 6 = ☐  9 × 3 = 30 – ☐ = ☐  9 × 8 = 80 – ☐ = ☐  9 × 5 = 50 – ☐ = ☐  20 × 2 = ☐, nō reira, 19 × 2 = ☐  100 × 4 =☐, nō reira, 99 × 4 = ☐ | *TPT, Pukapuka 6:*  • Parematatia (wh.54) |
| Ka whakamahia te ‘āhuatanga tātai kōaro’ o te whakarea hei whakamāmā i te whakareatanga. Hei tauira:  3 × 26 = 26 × 3 |  | *TPT, Pukapuka 6:*  • Te Huri Kōaro i te Whakareatanga (wh.58)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Waka Rererangi Rerekē (wh.14)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • Kua Pau te Wā (wh.8) |
| Ka whiriwhiria te maha o ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tauoti. |  | *TPT, Pukapuka 6:*  • Moni Whakawhitiwhiti (wh.43) |
| Ka whakamahia te ‘āhuatanga tātai tohatoha’, me ngā meka rearua hei whakaputa i ngā meka whakarea mō te 3, te 4, te 6 me  te 8. | 5 × 2 = ☐, nō reira, 5 × 4 = ☐, 4 × 5 = ☐  6 × 2 = ☐, nō reira, 6 × 3 = ☐,  6 × 4 = ☐, 6 × 6 = ☐, 6 × 8 = ☐  8 × 2 = ☐, nō reira, 8 × 3 = ☐, 8 × 4 = ☐, 8 × 6 = ☐, 8 × 8 = ☐  25 × 2 = ☐, nō reira, 25 × 3 = ☐,  25 × 4 = ☐, 25 × 8 = ☐ | *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • He Panga Tauwehe (wh.11)  • Te Whetū Taparau (wh.12)  • He Whakaata Rau (wh.t21) |
| Ka whakaoti whakareatanga ki te tau ngahuru, ki te tau rau, ki te tau mano, ki ētahi atu taupūtanga hoki o te 10. | 10 × 5 = ☐, 20 × 5 = ☐,  40 × 5 = ☐  10 × 8 = ☐, 20 × 8 = ☐, 30 × 8 = ☐  10 × 6 = ☐, 30 × 6 = ☐, 60 × 6 = ☐  100 × 4 = ☐, 200 × 4 = ☐, 400 × 4 = ☐  100 × 3 = ☐, 400 × 3 = ☐, 900 × 3 = ☐ | *TPT, Pukapuka 6:*  • Whakareatia ki te Tekau (wh.51)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Tokohia ka Ō (wh.4)  • Te Tau Tekau (wh.8) |
| Ka huri kōaro i ngā meka whakareatanga hei whakaoti rapanga tohatoha. | 9 × 4 = ☐, nō reira: Tohaina te 36 kia 4 ngā rōpū.  Kia 2 ngā rōpū.  10 × 6 = ☐, nō reira: Tohaina te 60 kia 10 ngā rōpū.  Kia 5 ngā rōpū. Kia 20 ngā rōpū.  8 × 3 = ☐, nō reira: Tohaina te 24 kia 3 ngā rōpū. Kia 6 ngā rōpū.  8 × 8 = ☐, nō reira: Tohaina te 64 kia 8 ngā rōpū.  Kia 4 ngā rōpū. Kia 16 ngā rōpū.  8 × 9 = ☐, nō reira: Tohaina te 72 kia 3 ngā rōpū.  Kia 18 ngā rōpū. | *TPT Pukapuka 6:*  • Hurihia te Whakawehenga hei Whakareatanga (wh.67)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Ngeru Nanakia (wh.15)  • Ka Pai te Peke Haere (wh.16) |
| Ka huri kōaro i ngā meka whakareatanga hei whiriwhiri i te maha o ngā rōpū ōrite kei roto i tētahi tau. | 8 × 5 = ☐, nō reira: E hia ngā rōpū o te 8 kei roto i te 40? Ngā rōpū o te 2? Ngā rōpū o te 4?  7 × 6 = ☐, nō reira: E hia ngā rōpū o te 6 kei roto i te 42? Ngā rōpū o te 7? Ngā rōpū o te 3? Ngā rōpū o te 14?  4 × 9 = ☐, nō reira: E hia ngā rōpū o te 8 kei roto i te 36? Ngā rōpū o te 3? Ngā rōpū o te 12? | *TPT, Pukapuka 6:*  • Peke Roa (wh.62)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • Hoki Ana ki te Kāinga (wh.11) |
| Ka kōwhiria te maha o ngā rautaki ā-hinengaro hei whakaoti rapanga tāpiri, rapanga tango, rapanga whakarea, rapanga whakawehe hoki. |  | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • He Moni Pūkoro (wh.15)  • A Keri te Kurī (wh.19)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • 31, Kore Rānei (wh.4) |

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| **Te Panuku o ngā Kaupae: 5 – 6** | | **Te Rautaki Paheko: Te Pānga Riterite** |
| **Ngā Whāinga Paetae: Te Tau, Taumata 3**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   3.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000,000: te whakaingoa i ngā tohutau; ngā momo raupapa tatauranga tauoti; ngā meka matua mō te tāpiri, te tango me te whakarea; te whakaawhiwhi tauoti, tau ā-ira hoki ki te 1, te 10, te 100 rānei e pātata ana; ngā tikanga uara tū o ngā tauoti me ngā tau ā-ira (kia 3 ngā mati ā-ira); te maha o ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  3.2 (Mātauranga Tau)  Ka mōhio ki ngā hautau (tae atu ki ngā hautau nui ake i te kotahi) me ngā tau ā-ira: te raupapa hautau (hautau waetahi), tau ā-ira hoki; ngā raupapa tatauranga hautau, tau ā-ira hoki (hautekau, haurau).  3.3 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te  tauoti, te hautau, te tau ā-ira me te ōrau: rautaki tatau; rautaki whakarōpū; rautaki tohatoha ōrite; rautaki tāpiripiri, rautaki whakarea māmā.  3.4 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | | |
| **Te Mātauranga** | **Ngā Rauemi e Hāngai ana** | |
| Ka mōhio ki ngā tau ā-ira, tae atu kia toru ngā mati ā-ira. | *TPT, Pukapuka 4:*  • Ararā! (wh.9)  • Kāri Pere (wh.11)  • Whakaaturia ki te Rārangi Tau (wh.18)  • He Aha te Tau? (wh.19)  • Kōwhiuwhiu Tau (wh.36)  • He Whare Uara Tū (wh.38)  • Te Hautanga ā-Ira (wh.63)  • Te Moni me te Hautanga ā-Ira (wh.67)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Me Ohu te Mahi (wh.24) | |
| Ka mōhio ki ngā tohu hautanga katoa, pērā i ngā hautekau, ngā haurau, ngā haumano, me ngā hautau nui ake i te kotahi. | *TPT, Pukapuka 4:*  • He Aho Pirepire (wh.23)  • He Wehenga Hautanga (wh.54)  • Te Hautau ki te Papa Tīrau 1 (wh.56)  • Te Hautau ki te Papa Tīrau 2 (wh.58)  • Ngā Hautau Waetahi-kore (wh.59)  • He Pākete Rare (wh.60) | |
| Ka mōhio ki ngā tatauranga hautau, whakamua, whakamuri hoki, mawhiti-haurua, -hauwhā,  -hautoru, -haurima, -hautekau. | *TPT, Pukapuka 4:*  • Tatau Māwhitiwhiti i te Rārangi Tau (wh.8)  • Ararā! (wh.9) | |
| Ka mōhio ki ngā tatauranga hautanga ā-ira, whakamua, whakamuri hoki, mawhiti-hautekau, -haurau. |  | |

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| Ka mōhio ki te raupapa hautau waetahi. | | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Kei a Wai te Keke Nui? (wh.42)  • Ngā Hautanga ki te Rārangi Tau (wh.46) | |
| Ka whakaawhiwhi tau ā-ira (tae atu kia rua ngā mati ā-ira) ki te tauoti e pātata ana. | | *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Te Whakaawhiwhi (wh.17) | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka whakamahia ngā meka whakarea, whakawehe hoki hei whiriwhiri i te hautanga o tētahi tau. Hei tauira:  o te 21 = 7 nā te mea 7 × 3 = 21. | o te 24 = ☐  o te 40 = ☐  o te 27 = ☐  o te 20 = ☐  o te 30 = ☐  o te 100 = ☐ | | *TPT, Pukapuka 7:*  • Ngā kōrero whakataki mō te Kaupae 5-6 (wh.39)  • Keke Huritau (wh.42)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:*  • He Reka ngā Kai (wh.20)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Te Reka Hoki! (wh.12)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Te Penapena Moni (wh.5)  • Te Kai Pūngao (wh.23) |
| Ka whakamahia te hangarite hei whiriwhiri i ngā hautanga o ngā āhua me ngā inenga roa, pērā i te porowhita, te tapawhā hāngai me te ngaku pepa. | Whakaaturia ēnei hautanga  o tētahi āhua:  , , , , , , , …  Whakaaturia ēnei hautanga  o tētahi āhua:  , , , , , , , , …  Whakaaturia ēnei hautanga  o tētahi āhua:  , , , , … | | *TPT, Pukapuka 7:*  • Hautanga Tukutuku (wh.46)  *He Tau Anō Te Tau: Te Tau, Taumata 2:*  • Tēnā Whātuia! (wh.22)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2–3:*  • Kaua te Waka e Whakarērea (wh.23)  • Te Wehewehe Parāoa Pokepoke (wh.22) |
| Ka whakaoti rapanga whakawehe e whai toenga ana, me te whakaatu anō i aua toenga hei hautau. | 5 ÷ 2 = ☐  3 ÷ 4 = ☐  6 ÷ 8 = ☐  7 ÷ 4 = ☐  2 ÷ 3 = ☐ | | *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Me Ohu te Mahi (wh.24) |
| Ka whiriwhiria he ōwehenga ōrite mā te tāruaruatanga. | 1:2 → ☐:4 → 8:☐ ...  2:3 → ☐:12 → 20:☐ ...  3:1 → ☐:7 → 30:☐ ...  2:5 → ☐:25 → 40:☐ ...  3:4 → ☐:16 → 33:☐ ...  5:3 → ☐:15 → 100:☐ ... | | *TPT, Pukapuka 7:*  • Pēke Kākano (wh.50) |
| Ka whiriwhiria te maha o ngā hautau waetahi kei roto i tētahi tauoti. Hei tauira:  te maha o ngā kei roto i te 5 →  5 ÷ | 3 ÷ = ☐  2 ÷ = ☐  4 ÷ = ☐  5 ÷ = ☐  10 ÷ = ☐  7 ÷ = ☐ | |  |

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| **Te Panuku o ngā Kaupae: 6 – 7** | | | **Te Rautaki Paheko: Te Tāpiri me te Tango** | |
| **Ngā Whāinga Paetae: Te Tau, Taumata 4**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   4.2 (Mātauranga Tau)  Ka mōhio ki ngā tikanga o: te tau tōraro me te tau tōrunga; te tau toitū; te ōwehenga; te uara tū o ngā tau ā-ira; te maha o ngā haumano, ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau ā-ira (tae atu kia 3 ngā mati ā-ira).  4.3 (Mātauranga Tau)  Ka mōhio ki te kimi mai i ngā taurea me ngā tauwehe o tētahi tau.  4.5 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira, te ōrau, te ōwehenga, te tau tōpū me te taupū māmā: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite māmā.  4.6 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | | | | |
| **Te Mātauranga** | | **Ngā Rauemi e Hāngai ana** | | |
| Ka mōhio ki te raupapa tatauranga whakamua, whakamuri hoki, mawhiti-haumano, mawhiti-haurau, mawhiti-hautekau, ā-tahi, mawhiti-tekau .., ahakoa te tau tīmatatanga. | | *TPT, Pukapuka 4:*  • Whakaaturia ki te Rārangi Tau (wh.18)  • Te Paparau me te Pukamano (wh.21)  • Kōwhiuwhiu Tau (wh. 36)  • He Whare Uara Tū (wh.38)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Whāia te Tau Teitei (wh.6) | | |
| Ka raupapahia ngā tau ā-ira (kia 3 ngā mati ā-ira). | | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Kāri Pere (wh.11)  • Raupapahia (wh.17)  • He Aha te Tau? (wh.19)  • He Aho Pirepire (wh.23)  • Te Tau Nui Rawa Atu (wh.25)  • Te Hautanga ā-Ira (wh.63) | | |
| Ka mōhio ki te maha o ngā rōpū o te 10, te 100, me te 1,000 kei roto i tētahi tau (tae atu ki ngā tau matiwhitu). | | *TPT, Pukapuka 4:*  • Whakawhitia ngā Paparanga Uara Tū (wh.88) | | |
| Ka whakaawhiwhia ngā tauoti me ngā tau ā-ira (tae atu kia 2 ngā mati ā-ira) ki te tahi, ki te hautekau rānei e pātata ana. | | *TPT, Pukapuka 4:*  • Whakaawhiwhinga Whaitake (wh.70)  • Whakaawhiwhia ki te Tekau (wh.94) | | |
| Ka whakaawhiwhia ngā tauoti me ngā tau ā-ira (tae atu kia 2 ngā mati ā-ira) ki te tahi, ki te hautekau rānei e pātata ana. | | *TPT, Pukapuka 4:*  • Whakaawhiwhinga Whaitake (wh.70)  • Whakaawhiwhia ki te Tekau (wh.94) | | |
| Ka whakaoti tāpiritanga, tangohanga hoki mā te tuhinga hātepe ōkawa, e whai wāhi mai ana he tauoti, he tau ā-ira rānei. | | *TPT, Pukapuka 5:*  • Te Tuhinga Ōkawa hei Whakaoti Tāpiritanga (wh.146)  • Te Tuhinga Ōkawa hei Whakaoti Tangohanga (wh.149)  • Te Tāpiri Hautau ā-Ira 1 (wh.158)  • Te Tango Hautau ā-Ira 1 (wh.160) | | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | | **Ngā Rauemi e Hāngai ana** |
| Ka whakamahia te rautaki whakarea hei whakaoti rapanga tāpiri, rapanga tango hoki, mēnā e whai wāhi mai ana he tauwehe pātahi. Hei tauira:  24 + 27 + 23 + 26 = 25 × 4 = 100 | 36 + 45 = ☐ → 4 × 9 + 5 × 9 = 9 × 9  = ☐  77 – 28 = ☐→ 11 × 7 – 4 × 7 =  7 × 7 = ☐  24 + 48 + 64 + 32 → (3 + 6 + 8 + 4) × 8 = 21 × 8 = ☐  29 + 30 + 28 + 33 + 32 + 27 + 31 + 30 = ☐ → 30 × 8 = ☐  99 – 36 – 27 = ☐ → (11 – 4 – 3) × 9 = ☐ | | | *TPT, Pukapuka 5:*  • Te Tāpiri i tētahi Raupapatanga Tau (wh.179)  • Te Whakarea hei Whakaoti Tāpiritanga, Tangohanga hoki (wh.182)  *TPT, Pukapuka 8:*  • Te Tāpiri i tētahi Raupapatanga Tau (wh.97)  *He Tau Anō Te Tau:  Te Mātauranga Tau Me Te Whakaaro Taurangi, Pukapuka Tuatahi, Taumata 3:*  • He Paheko Rauhanga (wh.16) |
| Ka whakaoti rapanga tāpiri, rapanga tango hoki, e whai wāhi mai ana te tau tōpū (arā, he tau tōraro, he tau tōrunga). | +2 + +3 = ☐  –4 + –1 = ☐  +4 + –5 = ☐  –2 + –8 = ☐  +6 – +5 = ☐  –7 – –3 = ☐  +5 – –2 = ☐  –3 – +7 = ☐ | | | *TPT, Pukapuka 5:*  • Utua mai, Utua atu (wh.172)  • He Puke, he Hāpua (wh.174)  *TPT, Pukapuka 8:*  • Te Tau Tōraro me te Tangohanga (wh.86)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Kei Riro i te Korokoro o te Mako (wh.23)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • Ngā Ahi Tipua o Aotearoa (wh.20)  • Ka Teitei Ake, ka Makariri Ake (wh.22) |
| Ka whakamahia te whānui o ngā rautaki tau ā-hinengaro, ā-tuhi hoki, hei whakaoti rapanga e whai wāhi mai ana te tāpiri, te tango, te whakarea me te whakawehe tauoti. | E toru ngā tī-hāte i hokona e Hūria, $16 te utu mō ia tī-hāte. E whā hoki ngā tarau poto, $13 mō ia tarau poto. E hia te tapeke o te utu?  E 204 katoa ngā kēne waireka, e hono ana hei pūkei takiono. Ka pau te 13 o ēnei pūkei takiono. E hia kēne e toe mai ana?  Ka tōpūngia ngā pūtea e whā nei,  te $43, te $56, te $21, me te $33. Ka tohaina te tapeke ki ētahi hoa tokowhā, kia ōrite te whiwhinga a tēnā me tēnā. E hia tāra te whiwhinga a tētahi? | | | *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • He Tāpiri Takirua (wh.9)  • Te Hahaupōro ā-Tātaitai (wh.18)  • Kimihia te Tau (wh.16)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • Te Huri Haere mā Raro (wh.2)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Mā te Mahi te Wawata ka Ea (wh.10)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Hei Aha te Tātaitai! (wh.13)  • Te Kapa Haka (wh.14) |

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| **Te Panuku o ngā Kaupae: 6 – 7** | **Te Rautaki Paheko: Te Whakarea me te Whakawehe** |
| **Ngā Whāinga Paetae: Te Tau, Taumata 3**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   3.1 (Mātauranga Tau)  Ka mōhio ki ngā tauoti 0–1,000,000: te whakaingoa i ngā tohutau; ngā momo raupapa tatauranga tauoti; ngā meka matua mō te tāpiri, te tango me te whakarea; te whakaawhiwhi tauoti, tau ā-ira hoki ki te 1, te 10, te 100 rānei e pātata ana; ngā tikanga uara tū o ngā tauoti me ngā tau ā-ira (kia 3 ngā mati ā-ira); te maha o ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau; te rahi me te hanga o tētahi tau.  **Ngā Whāinga Paetae: Te Tau, Taumata 4**  4.5 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira, te ōrau, te ōwehenga, te tau tōpū me te taupū māmā: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite māmā.  4.6 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | |
| **Te Mātauranga** | **Ngā Rauemi e Hāngai ana** |
| Ka mōhio ki ngā rōpū o te tekau, o te rau, o te mano kei roto i ngā tau matiwhitu. | *TPT, Pukapuka 4:*  • Tātaitai (wh.15)  • Huria te Tau (wh.87)  • Whakawhitia ngā Paparanga Uara Tū (wh.88) |
| Ka raupapahia ngā tau ā-ira (kia 3 ngā mati ā-ira). | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Kāri Pere (wh.11)  • Raupapahia (wh.17)  • He Aha te Tau? (wh.19)  • He Aho Pirepire (wh.23)  • Te Tau Nui Rawa Atu (wh.25)  • Te Hautanga ā-Ira (wh.63) |
| Ka whakaputa wawe i ngā meka whakarea, tae atu ki te 10 × 10, me ngā meka whakawehe e whai pānga ana. | *TPT, Pukapuka 4:*  • Ararā! (wh.9)  • Raupapatanga Meka Matua (wh.111)  • Whiriwhiria te Paheko (wh.112)  • Whakareatia (wh.113)  • He Ara Paheko Tau (wh.114)  • Te Whakarea hei Whakaoti Whakawehenga (wh.116)  • Whārite Whakareatanga (wh.118)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 2-3:*  • Mirimiri Mataono (wh.2)  • He Panga Tāpiapia (wh.20)  • Kāri Whakarori (wh.23)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • He Panga Tauwehe (wh.11)  • Te Whetū Taparau (wh.12)  • He Takirua Rite (wh.15)  • He Whakaata Rau (wh.21) |

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|  | | *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:*  • Te Tukutuku Taurea (wh.10)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Waka Rererangi Rerekē (wh.14)  • Ngeru Nanakia (wh.15)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • He Pāngarau te Pikitia (wh.6)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Ngā Iwa Māmā (wh.14) | |
| Ka mōhio ki te maha o ngā rōpū (o ngā tau tae atu ki te 10) kei roto i tētahi tauoti (tae atu ki te 100), me ngā toenga ka hua mai. Hei tauira:  E 6 ngā rōpū o te ono kei roto i te 38, me te 2 e toe mai ana. | |  | |
| Ka whakaotia te hātepe ōkawa poto mō te whakarea me te whakawehe (tau matitoru ki te tau matitahi). | | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua,*  *Taumata 3-4:*  • He Iwi Kē, he Tikanga Kē (wh.4) | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka whakamahia te rautaki ‘wāwāhi uara tū’ hei whakaoti rapanga whakarea (arā, te āhuatanga tātai tohatoha o te whakarea). | 44 × 3 = ☐ → 40 × 3 + 4 × 3  27 × 7 = ☐ → 20 × 7 + 7 × 7  53 × 9 = ☐ → 50 × 9 + 3 × 9  36 × 8 = ☐ → 30 × 8 + 6 × 8  217 × 4 = ☐ → 200 × 4 + 10 × 4 + 7 × 4 | | *TPT, Pukapuka 6:*  • Ngā kōrero whakataki mō te Kaupae 6-7 (wh.71)  • Rautaki Whakarea Whānui (wh.84)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Ngā Tini Tari (wh.22)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • He Tātaitanga Kapa Haka (wh.7)  • Kei Ngaro! (wh.8)  • Pērā Rawa te Pakeke? (wh.12)  • Tiakareti Tuawhiti (wh.15)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Pīataata Ana! (wh.12)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • He Rerekē te Āhua, he Rite te Otinga (wh.17)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • Kia Tika te Tapatapahi i te Tōtiti (wh.14)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:*  • He Whātoro Whakarea (wh.2) |
| Ka whakaoti rapanga tāpiri, rapanga tango hoki, e whai wāhi mai ana te tau tōpū (arā, he tau tōraro, he tau tōrunga). | +2 + +3 = ☐  –4 + –1 = ☐  +4 + –5 = ☐  –2 + –8 = ☐  +6 – +5 = ☐  –7 – –3 = ☐  +5 – –2 = ☐  –3 – +7 = ☐ | | *TPT, Pukapuka 5:*  • Utua mai, Utua atu (wh.172)  • He Puke, he Hāpua (wh.174)  *TPT, Pukapuka 8:*  • Te Tau Tōraro me te Tangohanga (wh.86)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Kei Riro i te Korokoro o te Mako (wh.23)  *He Tau Anō Te Tau:Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • Ngā Ahi Tipua o Aotearoa (wh.20)  • Ka Teitei Ake, ka Makariri Ake (wh.22) |
| Ka whakamahia te rautaki ‘te tau mama me te tikanga paremata’ hei whakaoti rapanga whakarea (arā, te āhuatanga tātai tohatoha o te whakarea). | 26 × 4 = ☐ → 25 × 4 + 1 × 4  99 × 6 = ☐ → 100 × 6 – 1 × 6  48 × 7 = ☐ → 50 × 7 – 2 × 7  47 × 8 = ☐ → 50 × 8 – 3 × 8  248 × 6 = ☐ → 250 × 6 – 2 × 6 | | *TPT Pukapuka 6:*  • Rautaki Whakarea Whānui (wh.84)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • He Tikanga Maha (wh.10)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Me Penapena ka Tika (wh.15)  • He Rautaki Whakarea (wh.16) |
| Ka whakamahia te rautaki ‘pānga riterite’ pērā i te rearua me te haurua, te reatoru me te hautoru, hei whakaoti rapanga whakarea. | 6 × 4 = ☐, nō reira, ☐ × 2 =24 ☐ × 3 = 24  10 × 12 = ☐, nō reira, 5 × ☐ = 120 ☐ × 6 = 120  8 × 9 = ☐, nō reira, ☐ × 3 = 72 4 × ☐ = 72  4 × 16 = ☐ → 8 × 8 =☐  5 × 468 = ☐ → 10 × 234 =☐  33 × 18 = ☐ → 99 × 6 = ☐ | | *TPT, Pukapuka 6:*  • Tapahia, ka Whakapiri ai (wh.79)  *TPT, Pukapuka 8:*  • Te Rearua me te Haurua (wh.40)  • Whakareatia ki te 25 (wh.42) |
| Ka whakamahia te rautaki ‘wāwāhi uara tū’ hei whakaoti rapanga whakawehe, me te mōhio anō ki te tuhinga ōkawa. Hei tauira: | 96 ÷ 4 = ☐ → 80 ÷ 4 = 20 me te 16 ÷ 4 = 4  135 ÷ 5 = ☐ → 100 ÷ 5 = 20 me te 35 ÷ 5 = 7  189 ÷ 3 = ☐ → 180 ÷ 3 = 60 me te 9 ÷ 3 = 3  414 ÷ 9 = ☐ → 360 ÷ 9 = 40 me te 54 ÷ 9 = 6  296 ÷ 8 = ☐ → 240 ÷ 8 = 30 me te 56 ÷ 8 = 7  318 ÷ 6 = ☐→ 300 ÷ 6 = 50 me te 18 ÷ 6 = 3 | | *TPT, Pukapuka 6:*  • Te Hātepe Ōkawa (wh.100)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Piua Mai ō Kapa ki te Pōtae! (wh.11)  • He Tuha Uka, he Kai Uka (wh.18) |
| Ka whakamahia te rautaki ‘te tau mama me te tikanga paremata’ hei whakaoti rapanga whakawehe. | 100 ÷ 4 = 25, nō reira, 96 ÷ 4 = ☐  180 ÷ 3 = 60, nō reira, 162 ÷ 3 = ☐  490 ÷ 7 = 70, nō reira, 476 ÷ 7 = ☐  640 ÷ 8 = 80, nō reira, 616 ÷ 8 =☐  810 ÷ 9 = 90, nō reira, 792 ÷ 9 = ☐ | | *TPT, Pukapuka 6:*  • Te Hātepe Ōkawa (wh.100)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Wehe ana i te Rekareka! (wh.18) |
| Ka whakamahia te rautaki ‘wāwāhia he tauwehe’ hei whakaoti rapanga whakarea, rapanga whakawehe hoki. | 4 × 44 = ☐ → 2 × 2 × 44  8 × 57 = ☐ → 2 × 2 × 2 × 57  12 × 23 = ☐ → 2 × 2 × 3 × 23  72 ÷ 4 = ☐ → 72 ÷ 2 ÷ 2 = ☐  184 ÷ 8 = ☐ → 184 ÷ 2 ÷ 2 ÷ 2 = ☐  396 ÷ 6 = ☐ → 396 ÷ 3 ÷ 2 = ☐ | | *TPT, Pukapuka 6:*  • Mā te Tauwehe (wh.118) |
| Ka whakamahia te rautaki ‘pānga riterite’ hei whakaoti rapanga whakawehe. Hei tauira, ko te haurua me te rearua, ko te hautoru me te reatoru. | 52 ÷ 4 = ☐ → 26 ÷ 2 = ☐  208 ÷ 8 = ☐ → 104 ÷ 4 = ☐,  52 ÷ 2 = ☐  408 ÷ 12 = ☐ → 204 ÷ 6 = ☐,  102 ÷ 3 = ☐  378 ÷ 27 = ☐ → 42 ÷ 3 = ☐ | | *TPT, Pukapuka 6:*  • Hākari (wh.92)  *TPT, Pukapuka 8:*  • Te Tikanga o te Tohu Ōrite (wh.33) |
| Ka whakamahia te rautaki ‘pānga riterite’ hei whakaoti rapanga whakawehe. | 24 ÷ 4 = 6, nō reira, 24 ÷ 8 = ☐, 24 ÷ 2 = ☐  40 ÷ 10 = 4, nō reira, 40 ÷ 5 = ☐, 40 ÷ 20 = ☐  72 ÷ 9 = 8, nō reira, 72 ÷ 3 = ☐, 72 ÷ 18 = ☐  56 ÷ 8 = 7, nō reira, 56 ÷ 16 = ☐, 56 ÷ 4 = ☐  1,000 ÷ 2 = 500, nō reira,  1,000 ÷ 4 = ☐, 1,000 ÷ 8 = ☐ | | *TPT, Pukapuka 6:*  • Te Pānga Riterite hei Whakaoti Whakawehenga (wh.88) |
| Ka whakamahia te rautaki ‘te wāwāhi uara tū’ hei whakaoti rapanga whakarea, whakawehe hoki, me te mōhio hoki ki te hātepe ōkawa mō te whakarea. | 10 × 20 = 200, nō reira, 14 × 23 = ☐  20 × 40 = 800, nō reira, 23 × 47 = ☐  50 × 40 = 2,000, nō reira, 53 × 46 = ☐  900 ÷ 30 = 30, nō reira,  1,080 ÷ 30 = ☐  4,000 ÷ 80 = 50, nō reira,  3,840 ÷ 80 = ☐  10,000 ÷ 100 = 100, nō reira, 10,000 ÷ 25 = ☐ | | *TPT, Pukapuka 6:*  • Whakareatanga Whakawhiti (wh.105)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • He Tauira Tau (wh.8)  • E Hia? (wh.12) |
| Ka whakaoti rapanga whakawehe e whai toenga ana, ā, ka whakaaturia te toenga hei tauoti, hei hautau, hei tau ā-ira rānei, i runga anō i te horopaki. Hei tauira:  38 ÷ 4 = 9 t2  38 ÷ 4 = 9.5  38 ÷ 4 = 9 | 34 ÷ 2 = 17, nō reira, 35 ÷ 2 = ☐  75 ÷ 5 = 15, nō reira, 78 ÷ 5 = ☐  64 ÷ 4 = 16, nō reira, 67 ÷ 4 = ☐  51 ÷ 3 = 17, nō reira, 53 ÷ 3 = ☐  200 ÷ 8 = 25, nō reira, 205 ÷ 8 = ☐  480 ÷ 24 = 20, nō reira, 486 ÷ 24 = ☐ | | *TPT, Pukapuka 6:*  • He Toenga (wh.96)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • He Taonga Tonu te Toenga (wh.22) |
| Ka whakamahia ngā ture whakawehe mō te 2, te 3, te 4, te 5, te 6, te 8 me te 9. | He taurea ēnei o te 4 me te 8?  132, 248, 481, 925, 2,412, 6,664  He taurea ēnei o te 3 me te 9?  72, 144, 267, 496, 1,002  He taurea ēnei o te 6?  108, 243, 522, 963 | | *TPT, Pukapuka 6:*  • Whakawehea ki te Iwa, ki te Toru rānei (wh.108)  *TPT, Pukapuka 8:*  • Te Whakamātau Whakawehenga (wh.93)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Ngā Iwa Māmā (wh.14)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • Kei te Mataono te Kōrero (wh.20) |
| Ka mōhio ki te whakarea, ki te whakawehe hoki i tētahi tau ki te 10, ki te 100, ki te 1,000, ki tētahi atu taupū rānei o te 10. |  | | *TPT, Pukapuka 6:*  • He Māmā te Pūnaha Tekau (wh.74) |
| Ka whakaoti rapanga e whai wāhi mai ana te raupapatanga o ngā paheko e whā. |  | | *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3:*  • Te Hanga Tau (wh.24)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  He Pātene Pakaru (wh.19)  Te Papa Patopato (wh.21)  He Koeko Tapawhā (wh.23)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • He Rapanga o Ia Rā (wh.20)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • He Iwi Kē, he Tikanga Kē (wh.4)  • Kia Mākona te Katoa (wh.5)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • He Tauira Tau (wh.8) |

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| **Te Panuku o ngā Kaupae: 6 – 7** | | | **Te Rautaki Paheko: Te Pānga Riterite** | |
| **Ngā Whāinga Paetae: Te Tau, Taumata 4**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   4.1 (Mātauranga Tau)  Ka mōhio ki: ngā meka whakawehe matua; te whakaawhiwhi tauoti, tau ā-ira hoki.  4.2 (Mātauranga Tau)  Ka mōhio ki ngā tikanga o: te tau tōraro me te tau tōrunga; te tau toitū; te ōwehenga; te uara tū o ngā tau ā-ira; te maha o ngā haumano, ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau ā-ira (tae atu kia 3 ngā mati ā-ira).  4.3 (Mātauranga Tau)  Ka mōhio ki te kimi mai i ngā taurea me ngā tauwehe o tētahi tau.  4.4 (Mātauranga Tau)  Ka mōhio ki ngā hautau, ngā tau ā-ira, ngā ōrau me ngā ōwehenga māmā: ngā huringa hautau ↔ tau ā-ira ↔ ōrau; ngā raupapa tatauranga tau ā-ira (haumano, haurau, hautekau); te raupapa hautau, tau ā-ira, ōrau hoki; te whiriwhiri hautau ōrite.  4.5 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira, te ōrau, te ōwehenga, te tau tōpū me te taupū māmā: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite māmā.  4.6 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga. | | | | |
| **Te Mātauranga** | | **Ngā Rauemi e Hāngai ana** | | |
| Ka raupapahia ngā tau ā-ira, kia toru ngā mati  ā-ira. Hei tauira: 6.25 < 6.3 | | *TPT, Pukapuka 4:*  • Kōwhiuwhiu Tau (wh.36)  • He Whare Uara Tū (wh.38)  • Ko Wai ka Toa? (wh.48)  • Te Hautanga ā-Ira (wh.63)  • Hautau Ōrite Huhua (wh.73)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Te Tātai Tau ā-ira (wh.15)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • He Tārai Tauākī (wh.20) | | |
| Ka raupapahia ngā hautau, pērā i ngā haurua, ngā hautoru, ngā hauwhā, ngā haurima me ngā hautekau. | | *TPT, Pukapuka 4:*  • Raupapahia ngā Kāri (wh.10)  • Raupapahia (wh.17)  • He Aho Pirepire (wh.23)  • Kei a Wai te Keke Nui? (wh.42)  • Te Raupapa Hautau (wh.49)  • Te Hautau ki te Papa Tīrau 1 (wh.56)  • Te Hautau ki te Papa Tīrau 2 (wh.58)  • Ngā Hautau Waetahi-kore (wh.59)  • He Pākete Rare (wh.60)  • Te Hautanga ā-Ira (wh.63)  *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:*  • Wāhanga Porohita (wh.17)  • Hautau Hirahira (wh.18)  • E Hia? (wh.20) | | |
| Ka mōhio ki ngā huringa hautau ↔ tau ā-ira ↔ ōrau mō ngā haurau, ngā hautoru, ngā hauwhā, ngā haurima me ngā hautekau. | | *TPT, Pukapuka 4:*  • Hautanga Ōrite (wh.51)  • He Aho Pirepire (wh.23)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Te Hautau hei Tau ā-ira (wh.13)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Tirohia te Pepa (wh.11)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua,*  *Taumata 3-4:*  • He Tūhonohono Hautau (wh.15)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru,*  *Taumata 3-4:*  • Ai e Hika e! (wh.24)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:*  • Te Whiriwhiri Tau ā-Ira (wh.21)  • Te Toa Tau ā-Ira (wh.24) | | |
| Ka mōhio ki ngā hautau ōrite mō ngā haurua, ngā hautoru, ngā hauwhā, ngā haurima me ngā hautekau. | | *TPT, Pukapuka 4:*  • He Nui Ake te Hauwhā i te Haurua! (wh.44)  • Ngā Hautanga ki te Rārangi Tau (wh.46)  • Hautanga Ōrite (wh.51)  • Hautau Ōrite Huhua (wh.73)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 3:*  • Ka Hau ngā Hautau (wh.9)  • He Hautau Anō (wh.10)  • Kei Ngoungou Haere (wh.11)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • He Rerekē, engari he Rite (wh.22)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • He Hautau Hanawiti (wh.11) | | |
| Ka whakaawhiwhi tau ā-ira (tae atu kia rua ngā mati ā-ira), ki te tauoti, ki te hautekau rānei e pātata ana. | | *TPT, Pukapuka 4:*  • Whakaawhiwhinga Whaitake (wh.70)  • Whakaawhiwhia ki te Tekau (wh.94)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • Hoea, Hoea Rā (wh.6) | | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | | **Ngā Rauemi e Hāngai ana** |
| Ka wāwāhi hautanga hei whiriwhiri hautau ōrite. Hei tauira: = , mā te wāwāhi i ia hauwhā kia 5 ngā wehenga ōrite. | Wāwāhia te kia 4 ngā wehenga ōrite. He aha te hautau ōrite?  ( = )  Wāwāhia te kia 3 ngā wehenga ōrite. He aha te hautau ōrite?  ( = )  Wāwāhia te kia 2 ngā wehenga ōrite. He aha te hautau ōrite?  ( = )  Wāwāhia te kia 6 ngā wehenga ōrite. He aha te hautau ōrite? ( = ) | | | *TPT, Pukapuka 7:*  • Ngā kōrero whakataki mō te Kaupae 6–7 (wh.57)  *TPT, Pukapuka 8:*  • Te Hautau Ōrite (wh.46)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Ka Hau ngā Hautau (wh.9)  • He Hautau Anō (wh.10)  • Kia Tere te Piki! (wh.14) |
|  | = = =  = = = | | | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • He Rerekē, Engari he Rite (wh.22)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Te Moana Nui a Tīpa (wh.3)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • He Hautau Hanawiti (wh.11) |
| Ka whakamahia ngā hautau māmā e mōhiotia ana me ngā hautau ōrite, hei raupapa hautau. Hei tauira:  < nā te mea = , ā, te itinga ake o tērā i te , engari te itinga ake o te i te . | Ko tēhea te hautau rahi ake? He pēhea nei te rahinga ake?  te , te rānei  te , te rānei  te , te rānei  te , te rānei  te , te rānei  te , te rānei  te , te rānei  te , te rānei | | | *TPT Pukapuka 8:*  • Te Whakatau Tata i ngā Hautau (wh.44)  • Te Hautau Ōrite (wh.46) |
| Ka whakamahia ngā meka whakarea, whakawehe hoki, hei whiriwhiri i te hautanga o tētahi tauoti. Hei tauira:  o te 36 = 2 × o te 36  = 2 × 36 ÷ 3  = 2 × 12  = 24 | o te 60 = ☐  o te 64 = ☐  o te 42 = ☐  o te 56 = ☐  o te ☐ = 27  o te ☐ = 16  o te ☐ = 84  o te 72 = 27  o te 48 = 28 | | | *TPT, Pukapuka 8:*  • Te Whakarea i te Hautau ki te Tauoti (wh.65)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • Ka Huri te Ihu ki te Wā Kāinga (wh.24)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • He Māpere Mīharo (wh.21)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • Te Waihanga Hautau (wh.12)  • Tēnā Inea! (wh.13)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • He Hautau Hākinakina (wh.16) |

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| Ka whakaoti rapanga e whai wāhi mai ana te whakareatanga hautau ki te hautau. Hei tauira:  × = = | × = ☐  × = ☐  × = ☐  × = ☐  × = ☐  × = ☐ | *TPT, Pukapuka 8:*  • Te Whakarea i te Hautau ki te Hautau (wh.67)  • He Whakanui, he Whakaiti rānei te Whakarea (wh.69) |
| Ka whakaoti whakawehenga hei huri i ngā hautau nui ake i te tahi hei tau hanumi.  Ka whakanoho hautau nui ake i te tahi ki te rārangi tau. | Hurihia ēnei hautau hei tau hanumi, ka whakaatu ai ki tētahi rārangi tau: | *TPT, Pukapuka 8:*  • He Hautau Nui Ake i te Kotahi (wh.49) |
| Ka whakaoti rapanga whakawehe e whai wāhi mai ana te otinga hautanga. Hei tauira: 8 ÷ 3 = 2  Ka tūhonoa te whakawehenga ki te taurunga me te tauraro o tētahi hautau. Hei tauira: 4 ÷ 5 = | 5 ÷ 4 = ☐  8 ÷ 3 = ☐  12 ÷ 5 = ☐  5 ÷ 6 = ☐  3 ÷ 7 = ☐  13 ÷ 8 = ☐  1 ÷ ☐ =  7 ÷ ☐ =  2 ÷ ☐ =  17 ÷ ☐ = 1  ☐ ÷ 3 = 3  ☐ ÷ 5 = 1  ☐ ÷ 6 = 1  ☐ ÷ 9 = 4 | *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Te Hautau hei Tau ā-Ira (wh.13) |
| Ka whakaotia ngā huringa hautau ↔ tau ā-ira ↔ ōrau. | 3 ÷ 2 = 1 = 1.5 = 150%  5 ÷ 4 = 1 = 1.25 = 125%  3 ÷ 8 = = 0.375 = 37.5%  2 ÷ 3 = = 0.6 = 66.6%  = 1 = 1.4 = 140%  = ☐ | *TPT, Pukapuka 7:*  • Te Papa Hautanga ā-Ira (wh.67)  *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:*  • Te Whiriwhiri Tau ā-Ira (wh.21)  • Te Toa Tau ā-Ira (wh.24)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Ngā Ākinga a te Tai (wh.8)  • Huripokia (wh.10)  • Tirohia te Pepa (wh.11) |
| Ka whakamahia ngā ōrau māmā e mōhiotia ana hei whakatau tata, hei whiriwhiri i te ōrau o tētahi tauoti. Hei tauira:  65% o te $80 = (50% o te $80) + (10% o te $80) + (5% o te $80)  = $40 + $8 + $4  = $52 | 10% o te 48 ↔ 30% o te 48  50% o te 64 ↔ 25% o te 64  10% o te 28 ↔ 5% o te 28  50% o te 56, 10% o te 56 ↔ 60% o te 56  10% o te 35, 5% o te 35 ↔ 15% o te 35  50% o te 140, 10% o te 140, 5% o te 140 ↔ 65% o te 140 | *TPT Pukapuka 7:*  • Ringa Tītere (wh.82)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • Te Toa Pukapuka Utupai (wh.18)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Whakaheke Utu, Whakaheke Ngaru (wh.24)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Te Ringa Tītere (wh.12)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • Ka Piki Tonu te Utu (wh.16) |
|  | + = = 1  += = 2  – =  + = = 1  – =  + = = 1  – = | *TPT Pukapuka 7:*  • Hautau Tāpiripiri, Hautau  Tangotango (wh.111)  *TPT Pukapuka 8:*  • Te Whakatau Tata i ngā Hautau (wh.44)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Te Whakaapaapa Haere (wh.20) |
| Ka whakaoti rapanga e whai wāhi mai ana te tāpiri me te tango hautau. | 1.2 + 3.8 = 4  0.75 + 1.25 = 2  5 – 2.25 = 2.75  0.5 + 1.25 = 1.75  2.5 – 1.75 = 0.75  0.375 + 1.625 = 2  3 – 0.001 = 2.999  2.673 + 1.327 = 4  5.2 – 1.68 = 3.52 | *TPT Pukapuka 5:*  • Te Tāpiri Hautau ā-Ira (1) (wh.158)  • Te Tango Hautau ā-Ira (1) (wh.160)  *TPT Pukapuka 7:*  • He Paipa ā-Ira (wh.61)  • Tāpiritanga Tau ā-Ira Māmā (wh.74)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:*  • Te Tapeke hei Whakamaunga Atu (wh.16)  • Te Tātaitanga Tau ā-Ira (wh.17)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • Te Eke Ngaru (wh.2) |
| Ka whakaoti rapanga whakawehe e whai wāhi mai ana he hautau, e whai pānga ana ngā tauraro. Hei tauira:  E hia ngā hauono kei roto i te 1?  1÷= ÷ = 9 | E hia ngā:  kei roto i te (÷ = ÷ = 6)  kei roto i te (÷ =÷ = 8)  kei roto i te (÷ = ÷ = 10)  kei roto i te 4(÷ = ÷ = 6)  kei roto i te ( ÷ = ÷ = 6)  kei roto i te ( ÷ = ÷ = 8 | *TPT, Pukapuka 8:*  • Te Whakawehe Hautau (wh.62) |
| Ka rauapapahia ngā tau ā-ira ki tētahi rārangi tau. | Tuhia he rārangi tau mai i te 0 ki  te 5, ka whakaatu ai i ēnei:  2.5, 1.25, 4.9, 3.75, 0.67  Tuhia he rārangi tau mai i te 0 ki  te 2, ka whakaatu ai i ēnei:  0.2, 1.8, 0.66, 1.95, 1.125 | *TPT, Pukapuka 8:*  • Te Āwhata i te Rārangi Tau (wh.54)  • Te Whakaawhiwhi Tauoti (wh.57)  • He Hautau, he Tau ā-Ira Pōraruraru (wh.59) |
| Ka whakaoti rapanga ōwehenga māmā, mā te whakareatanga. Hei tauira: He ōrite te utu i te $7 mō te kg me te utu i te $21 mō te 1kg. | Te hoko waiārani:  E $4 mō te 1 rita = $32 mō te 8 rita  E $7 mō te 2 rita = $35 mō te 10 rita  E $3 mō te rita = $18 mō te 3 rita  E $9 mō te 1 rita = $36 mō te 6 rita  E $5 mō te rita = $40 mō te 6 rita | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:*  • Ngā Tau Rererua (wh.2)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • He Rā Anō, he Rapanga Anō (wh.21)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • He Piko, he Taniwha! (wh.19)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • He Tākiri Hinengaro (wh.4)  • Kakapa Ana te Manawa (wh.11) |
| Ka whakamahia te whakarea me te whakawehe hei whiriwhiri ōwehenga ōrite, me te whakaatu anō hei hautau ōrite. Hei tauira:  16:8 = 8:4 = 4:2 = 2:1, me te rite ki: = = = | 10:15 = 2:3 ↔ =  20:10 = 10:5 = 2:1 ↔ = =  12:36 = 6:18 = 3:9 = 1:3 ↔ = = =  18:27 = 6:9 = 2:3 ↔ = =  45:15 = 9:3 = 3:1 ↔ = =  16:48 = 8:24 = 4:12 = 2:6 = 1:3 ↔ = = = = | *TPT, Pukapuka 7:*  • Ranunga Peita (wh.87)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Nā Kukume, ko Roroa (wh.4)  • He Kākano Whaikano (wh.9) |

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| **Te Panuku o ngā Kaupae: 7 – 8** | | **Te Rautaki Paheko: Te Whakarea me te Whakawehe** | |
| **Ngā Whāinga Paetae: Te Tau, Taumata 4**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   4.2 (Mātauranga Tau)  Ka mōhio ki ngā tikanga o: te tau tōraro me te tau tōrunga; te tau toitū; te ōwehenga; te uara tū o ngā tau ā-ira; te maha o ngā haumano, ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau ā-ira (tae atu kia 3 ngā mati ā-ira).  4.3 (Mātauranga Tau)  Ka mōhio ki te kimi mai i ngā taurea me ngā tauwehe o tētahi tau.  4.4 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira, te ōrau, te ōwehenga, te tau tōpū me te taupū māmā: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite māmā.  4.6 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga.  **Ngā Whāinga Paetae: Te Tau, Taumata 5**  5.1 (Mātauranga Tau)  Ka mōhio ki ngā tikanga o te taupū me te tānga ngahuru. | | | |
| **Te Mātauranga** | | | |
| Ka mōhio ki ngā taupū māmā o ngā tau, tae atu ki te 10. Hei tauira:  • 24 = 16  • 53 = 125 | | | |
| Ka mōhio ki ngā ture whakawehe mō te 2, te 3, te 4, te 5, te 6, te 8, te 9 me te 10. Hei tauira, ka whakawehe pū te 568 ki te 4 nā te mea ka whakawehe pū te 68 ki te 4. | | | |
| Ka tautohu i ngā tauwehe nui rawa atu me ngā taurea iti rawa atu. Hei tauira, ko te 8 te tauwehe nui rawa atu o te 48 me te 64. | | | |
| Ka mōhio ki te whakarea, ki te whakawehe hoki i tētahi tauoti, i tētahi tau ā-ira rānei, ki tētahi taupū o te 10.  Hei tauira:  • 4.57 × 100 = 457  • 6.3 ÷ 0.9 = 7 | | | |
| Ka whai i te hātepe ōkawa poto hei whakaoti whakareatanga, whakawehenga hoki e whai wāhi mai ana te tauoti me te tau ā-ira, ka whakamārama hoki i tēnei rautaki. | | | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | **Ngā Rauemi e Hāngai ana** |
| Ka whakamahia te taupū hei whakaoti rapanga whakarea, me ngā rapanga e whai wāhi mai ana te horahanga me te rōrahi. | 8 × 16 = ☐ → 23 × 24 = 27  27 × 243 = ☐ → 33 × 35 = 38  642 = ☐ → 43 × 43 = 46  82 = 64 → √64 = ☐  302 = 900 → √900 = ☐  53 = 125 → = ☐ | | *TPT, Pukapuka 6:*  • He Taupū (wh.112)  *TPT, Pukapuka 8:*  • Te Pūrua (wh.80)  • Te Pūtakerua (wh.82)  • Te Pūtoru me te Pūtaketoru (wh.84)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • He Tirotiro Taupū (wh.22) |
| Ka whakamahia te rautaki ‘paheko kōaro’ hei whakaoti rapanga whakarea, rapanga whakawehe hoki. Hei tauira:  263 × ☐ = 456  456 ÷ 263 = ☐ | 6 × ☐ = 222 → 222 ÷ 6 = 37  ☐ × 9 = 657 → 657 ÷ 9 = 73  2.4 × ☐ = 20.64 → 20.64 ÷ 2.4 = 8.6  ☐ × 0.63 = 23.184 → 23.184 ÷ 0.63 = 36.8 | | *TPT, Pukapuka 8:*  • Te Huri Kōaro i te Whakareatanga me te Whakawehenga (wh.26) |
| Ka whakatau tata hei tirotiro i te otinga o tētahi rapanga whakarea, rapanga whakawehe hoki. | 48 × 32 ≈ 50 × 30 = 1,500  196 × 14 ≈ 200 × 14 = 2,800  2,718 ÷ 9 ≈ 2,700 ÷ 10 = 27  3,283 ÷ 49 ≈ 3,300 ÷ 50 = 4,966  7.7 × 4.3 ≈ 8 × 4 = 32  57.6 ÷ 8.2 ≈ 56 ÷ 8 = 7  591.61 ÷ 88.3 ≈ 600 ÷ 90 ≈ 7 | | *TPT, Pukapuka 8:*  • Te Whakatau Tata hei Tirotiro i te Tika o te Whakareatanga (wh.28)  • Te Whakatau Tata hei Tirotiro i te Tika o te Whakawehenga (wh.30)  *He Tau Anō Te Tau: Te Tau, Taumata 3:*  • Tokohia ka Ō? (wh.4)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Wehe ana i te Rekareka! (wh.18)  • Kuhuna ki te Wāhi Tika (wh.19) |

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| **Te Panuku o ngā Kaupae: 7 – 8** | | **Te Rautaki Paheko: Te Pānga Riterite** | | |
| **Ngā Whāinga Paetae: Te Tau, Taumata 4**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Mahere Tau | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   4.1 (Mātauranga Tau)  Ka mōhio ki: ngā meka whakawehe matua; te whakaawhiwhi tauoti, tau ā-ira hoki.  4.2 (Mātauranga Tau)  Ka mōhio ki ngā tikanga o: te tau tōraro me te tau tōrunga; te tau toitū; te ōwehenga; te uara tū o ngā tau ā-ira; te maha o ngā haumano, ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau ā-ira (tae atu kia 3 ngā mati ā-ira).  4.3 (Mātauranga Tau)  Ka mōhio ki te kimi mai i ngā taurea me ngā tauwehe o tētahi tau.  4.4 (Mātauranga Tau)  Ka mōhio ki ngā hautau, ngā tau ā-ira, ngā ōrau me ngā ōwehenga māmā: ngā huringa hautau ↔ tau ā-ira ↔ ōrau; ngā raupapa tatauranga tau ā-ira (haumano, haurau, hautekau); te raupapa hautau, tau ā-ira, ōrau hoki; te whiriwhiri hautau ōrite.  4.5 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira, te ōrau, te ōwehenga, te tau tōpū me te taupū māmā: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite māmā.  4.6 (Rautaki Tau)  Ka mārama ki te whaitakenga o te otinga o tētahi rapanga.  **Ngā Whāinga Paetae: Te Tau, Taumata 5**  5.1 (Mātauranga Tau)  Ka mōhio ki ngā tikanga o te taupū me te tānga ngahuru.  5.2 (Rautaki Tau)  Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tau tōpū, te hautau, te tau ā-ira, te ōrau, te ōwehenga, te pāpātanga me te taupū: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite.  5.3 (Rautaki Tau)  Ka whiriwhiri, ka whakamahi tauwehe pātahi, taurea pātahi hoki. | | | | |
| **Te Mātauranga** | | | **Ngā Rauemi e Hāngai ana** | |
| Ka mōhio ki te raupapatanga whakamua, whakamuri, mawhiti-haumano, mawhiti-haurau, mawhiti hautekau, mawhiti-tahi, mawhiti-tekau, mawhiti-rau, mawhiti-mano, ahakoa te tau ā-ira tīmatanga. | | | *TPT, Pukapuka 4:*  • Tātaitai (wh.15)  • Kōwhiuwhiu Tau (wh.36)  • He Whare Uara Tū (wh.38)  • Te Hautanga ā-Ira (wh.63) | |
| Ka mōhio ki te tau, he haumano, he haurau, he hautekau, he tahi, he tekau, he rau, he mano rānei, te rahinga ake, te itinga ake rānei, i tētahi tau. | | | *TPT, Pukapuka 4:*  • Tatau Māwhitiwhiti i te Rārangi Tau (wh.8)  • Te Tau ki Mua, te Tau ki Muri (wh.13)  • Kōwhiuwhiu Tau (wh.36) | |
| Ka raupapa hautau, tau ā-ira, ōrau hoki. | | | *TPT, Pukapuka 4:*  • Raupapahia (wh.17)  • He Aho Pirepire (wh.23)  • Kei a Wai te Keke Nui? (wh.42)  • He Nui Ake te Hauwhā i te Haurua! (wh.44)  • Ko Wai ka Toa (wh.48)  • Te Raupapa Hautau (wh.49)  • He Pākete Rare (wh.60)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Ngā Ākinga a te Tai (wh.8) | |
| Ka mōhio ki te maha o ngā haumano, ngā haurau me ngā hautekau kei roto i ngā tau ā-ira (tae atu kia 3 ngā mati ā-ira). | | | *TPT, Pukapuka 4:*  • Te Tikanga Nui o te Kore (wh.69)  • Whakawhitia ngā Paparanga Uara Tū (wh.88) | |
| Ka mōhio ki te whakarea tauoti, tau ā-ira rānei ki tētahi taupū o te 10. | | | *TPT, Pukapuka 4:*  • Huria te Tau (wh.87)  • He Mati Nukunuku (wh.95) | |
| Ka whakaawhiwhi tau ā-ira ki te rau, te tekau, te tahi, te hautekau, te haurau rānei e pātata ana. | | | *TPT, Pukapuka 4:*  • Whakaawhiwhia ki te Tekau (wh.94) | |
| Ka mōhio ki ngā huringa hautanga:  hautau ↔ tau ā-ira ↔ ōrau mō ngā hautanga e tino whakamahia ana, pērā i te hauwaru, te hautekau me ngā hau-rua tekau. | | | *TPT, Pukapuka 4:*  • Hautanga Ōrite (wh.51)  • Te Whakaawhiwhi Hautau hei Ōrau (wh.52)  *He Tau Anō Te Tau: Te Tau, Taumata 3-4:*  • Huripokia (wh.10) | |
| **Ngā Rautaki** | **Te Panuku o ngā Rapanga** | | | **Ngā Rauemi e Hāngai ana** |
| Ka tautohu i ngā tauwehe pātahi hei whiriwhiri ōwehenga ōrite. Ka huri ōwehenga hei hautau, hei ōrau hoki. Hei tauira:  16:48 = 2:6 = 1:3 (he tauwehe pātahi te 8 me te 16) 1:2 ↔= 33% | Ko ngā ranunga wai ārani hei horopaki:  6:9 = 16:24 = 2:3 6:9 ↔ = 40%  8:24 = 12:36 = 1:3 8:24 ↔ = 25%  20:12 = 45:27 = 5:3 20:12 ↔ = = 62.5%  9:12 = 3:4 = 15:20 9:12 ↔ = = 42.86%  28:35 = 4:5 28:35 ↔ = = 44.4% | | | *TPT, Pukapuka 7:*  • Ngā kōrero whakataki mō te Kaupae 7-8 (wh.93)  • Ringa Tītere Hikohiko (wh.98)  • Ranunga Peita Hikohiko (wh.105) |
| Ka tāpiri, ka tango hautau e whai wāhi mai ana te tau hanumi me te tauraro rerekē. Hei tauira:  + = = 1 | + = = 1  – =  + = = 1  – =  + = = 1  – = = 1 | | | *TPT, Pukapuka 7:*  • Hautau Tāpiripiri, Hautau  Tangotango (wh.111) |

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| Ka whakaoti rapanga e whai wāhi mai ana te whakarea hautau, me te whakawehe tauoti ki te hautau.  Ka mōhio ki te tikanga, ina whakawehea tētahi tau ki te hautau iti ake i te kotahi, he nui ake te otinga i te tau tīmatanga.  Hei tauira: 4 ÷=÷= 6 |  | *TPT, Pukapuka 8:*  • Te Whakawehe Hautau Uaua (wh.64)  • He Whakanui, he Whakaiti rānei te Whakawehe? (wh.70) |
| Ka whakatau tata, ka whakamahi hautanga māmā e mōhiotia ana, hei whakaoti rapanga e whai wāhi mai ana te whakarea me te whakawehe tau ā-ira. Hei tauira:  0.4 × 2.8 = 1.12 (0.4 <)  8.1 ÷ 0.3 = 27 (81 ÷ 3) | 3.2 × 0.3 = 0.96  0.72 × 8 = 5.76  0.25 × 2.4 = 0.6  15 × 0.33 = 4.95  5.6 ÷ 0.7 = 8  4.8 ÷ 1.5 = 3.2  7.2 ÷ 0.36 = 20  0.9 ÷ 0.03 = 30  24 ÷ 36 = 0.66 | *TPT, Pukapuka 7:*  • Te Whētui Hautau, Tau ā-Ira (wh.108)  *TPT, Pukapuka 8:*  • Te Whakatau Tata (wh.72)  • Te Whakarea Hautanga ā-Ira (wh.100)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • Te Whakapaipai i te Rūma Moe (wh.6)  • Te Pakeke Haere i Tuarangi (wh.8)  • Ka Pai te Mātaitai Parai (wh.9)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:*  • Kia Tika te Tapatapahi i te Tōtiti (wh.14) |
| Ka whakamahi tauwehe pātahi, me te pāpātanga waetahi hei whakaoti rapanga pāpātanga. Hei tauira:  490km i te 14 haora → 35km/h (mā te whakawehe ki te 7 kātahi ki te 2). | Ko te horoi motukā, ko te kato huarākau, ko te tawhiti o te haere i te wā hei horopaki:  18 i te ono haora, nō reira, e hia i te 15 haora? (18:6 = 45:15)  14:21 = 20:30 = 6:9  56:16 = 21:6 = 7:2  28:12 = 49:21 = 7:3  27:36 = 12:16 = 3:4 | *TPT, Pukapuka 7:*  • Te Pāpātanga (wh.121) |
| Ka whakaoti rapanga whakawehe e whai wāhi mai ana te otinga hautanga. Ka whakaaturia te toenga hei hautau, hei tau ā-ira rānei, i runga anō i te horopaki o te rapanga. Hei tauira:  19 ÷ 8 = 2, toenga 3 = 2= 2.375 | 30 ÷ 4 = 7 t2 = 7= 7.5  17 ÷ 3 = 5 t2 = 5= 5.  43 ÷ 5 = 8 t3 = 8= 8.6  157 ÷ 10 = 15 t7 = 15= 15.7  90 ÷ 8 = 11 t2 = 11= 11.25  58 ÷ 6 = 9 t4 = 9= 9.66 | *TPT, Pukapuka 8:*  • E Hia ka Toe mai? (wh.87)  • Te Whakamahi Toenga (wh.89) |

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| Ka tūhono, ka wāwāhi ōwehenga, ā, ka huri hei hautau, hei ōrau hoki. Hei tauira:  2:5 → 2:5 → 3:4 = 7:14 = 1:2 →→ 33% | 5:6 ⊕ 7:12 = 12:18 = 2:3  9:4 ⊕ 7:6 = 16:10 = 8:5  2:3 ⊕ 12:11 = 14:14 = 1:1  8:5 ⊕ 7:5 = 15:10 = 3:2  7:2 ⊕ 9:4 = 16:6 = 8:3  2:5 ⊕ 2:5 ⊕ 8:5 = 12:15 = 4:5  7:3 ⊕ 7:3 ⊕ 7:3 ⊕ 3:7 = 24:16 = 3:2  1:3 ⊕ 1:3 ⊕ 4:5 ⊕ 4:5 ⊕ 4:5 = 14:21 = 2:3 | *TPT, Pukapuka 8:*  • Te Ōwehenga me te Hautanga hei Tikanga Tohatoha (wh.112) |
| Ka whiriwhiria ngā hautau kei waenganui i ētahi hautau e rua, mā te whakamahi hautanga ōrite, mā te huri hei tau ā-ira, hei ōrau rānei, mā te whakamahi rānei i ngā hautau māmā e mōhiotia ana. Hei tauira:  < < , = | 10% o te 48 ↔ 30% o te 48  50% o te 64 ↔ 25% o te 64  Whiriwhiria he hautau kei waenganui i ēnei:  te me te  te me te  te me te  te me te  te me te  te me te  te me te  te me te  te me te  te me te | *TPT, Pukapuka 7:*  • Hautau Waenganui (wh.115) |
| Ka whakaoti rapanga e whai wāhi mai ana te whakamahinga o te hautau hei ine i tētahi atu hautau. Hei tauira:  ÷ = ÷ = 1 | ÷ = ÷ = = 3  ÷ = ÷ = = 1  ÷ = ÷ = = 1  ÷ = ÷ = = 1  ÷ = ÷ =  ÷ = ÷ = = | *TPT, Pukapuka 7:*  • Whakawehenga Hautau (wh.117) |
| Ka whakaoti rapanga e whai wāhi mai ana te whakapiki ōrau, te whakaheke ōrau rānei. Hei tauira:  Ka whakapikia te wāriu o te whare mai i te $240,000 ki te $270,000, arā, e $30,000 te whakapikinga. Ko te te hautaunga whakapiki = = 12.5% | E $69 te utu i muri i te tāpiritanga o te 15% tāke hokohoko (GST),  nō reira, ko te $60 te utu ake (kāore he tāpiritanga GST). Arā, 69 ÷ 1.15 = 60.  $92 → $80 (karekau he GST)  $138 → $120 (karekau he GST)  $230 → $200 (karekau he GST)  Te whakapikinga wāriu whare:  $125,000 → $150,000 = 20% te whakapikinga  $96,000 → $168,000 = 75% te whakapikinga  $495,000 → 495,000 = 0% te whakapikinga  $333,000 → 444,000 = 33% te whakapikinga  $256,000 → 332,000 = 29.7% te whakapikinga | *TPT, Pukapuka 8:*  • Tātaitanga Ōrau (wh.73)  • Te Whakatau Tata i te Ōrau (wh.74) |
| Ka whakatau tata, ka whakaoti i ngā rapanga ōrau, e whai wāhi mai ana te tauoti, te tau ā-ira rānei. Hei tauira:  E 35 o ngā tītere 56 a Hinewai i ū. E hia te ōrau o ana tītere i ū? | 25% o te 64 = 16  80% o te 45 = 36  35% o te 24 = 8.4  65% o te 36 = 23.4  58% o te 82 ≈ 60% o te 80 = 48 (ko te 47.56 te otinga tōtika)  77% o te 38 ≈ 75% o te 40 = 30 (ko te 29.26 te otinga tōtika)  32 o roto i te 48 ≈ 32 o roto i te 50 = 64% (ko te 66.6% te ōrau tōtika)  32 o roto i te 39 ≈ 32 o roto i te 40 = 80% (ko te 82% te ōrau tōtika)  22 o roto i te 29 ≈ 22 o roto i te 30 = 3 × 22 = 77% (ko te 75.8% te ōrau tōtika) | *TPT, Pukapuka 8:*  • He Rautaki Matarua hei Whakaoti Rapanga Ōrau (wh.76)  • He Rautaki Matatahi hei Whakaoti Rapanga Ōrau (wh.78)  • He Rapanga Ōrau Kōaro (wh.113)  *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:*  • Te Hoki mā Runga Waka Rererangi (wh.2) |
| Ka whakamahi tauwehe toitū, hei matapae mēnā he toenga hautau noa, he toenga hautau tāruarua rānei ka hua mai i tētahi whakawehenga. | Whiriwhiria ngā tauwehe toitū o ēnei:  20, 16, 25, 28, 15, 40, 18, 36, 70  Whiriwhiria mēnā he toenga hautau noa, he toenga hautau tāruarua rānei ka hua mai i ēnei whakawehenga:  1 ÷ 16 = ☐  1 ÷ 25 = ☐  1 ÷ 28 = ☐  1 ÷ 15 = ☐  1 ÷ 40 = ☐  1 ÷ 18 = ☐  1 ÷ 36 = ☐  1 ÷ 70 = ☐  He aha e hua mai ai he toenga hautau noa, he toenga hautau tāruarua rānei i ēnei whakawehenga?  = 0.2  = 0.3  = 0.5  = 0.1 |  |
| Ka whakaoti rapanga e whai wāhi mai ana te pāpātanga kōaro. Hei tauira:  E 9 ngā rangi ka oti i ngā tāngata tokowhā tētahi whare te peita. E hia ngā rangi ka oti taua whare te peita i ngā tāngata tokotoru?  4 × 9 = 36 ngā rangi mō te tangata kotahi. 36 ÷ 3 = 12 ngā rangi mō ngā tāngata tokotoru. | Te hanga whare:  E 2 ngā rangi, ka oti i ngā tāngata tokorima. E hia ngā rangi ka oti i te tokorua?  E 5 ngā rangi.  E 7 ngā rangi, ka oti i ngā tāngata tokowhā. E hia ngā rangi ka oti i ngā tāngata 14?  E 2 ngā rangi.  E 2 ngā rangi, ka oti i ngā tāngata tokorima. E hia ngā rangi ka oti i te tokorua?  E 5 ngā rangi.  E 6 ngā rangi, ka oti i ngā tāngata tokoono. E hia ngā rangi ka oti i te tokowaru?  E 4.5 ngā rangi.  E 4 ngā rangi, e 3 ngā heihei, e 6 ngā hēki ka puta mai. E hia rangi kia puta ngā hēki 10, mēnā e 5 ngā heihei?  E 4 ngā rangi.  E 7 ngā rā hei whakatū mā ētahi kaimahi tokowaru i tētahi whare. Nō reira, e hia ngā rā hei whakatū i ngā whare e 3, mēnā tokoono ngā kaimahi?  E 28 ngā rangi. | *TPT Pukapuka 8:*  • Te Whakatairite Pāpātanga (wh.111) |
| Ka whakaoti rapanga pākoki.  Hei tauira:  He aha te koki rewa o te waka  rererangi, mēnā e 679m tōna teitei, ā, e 2,604 te tawhiti o tana haere i muri i te rerenga atu? |  | *TPT Pukapuka 7:*  • Ōwehenga Pākoki (wh.129) |

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