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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**

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| 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, 7E hia katoa ngā mea kei konei ..? (kia rua ngā huinga)2 me te 1 3 me te 21 me te 43 me te 35 me te 2 2 me te 25 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**

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| 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 = 53 + 4 = 7 5 + 5 = 102 + 5 = 76 + 3 = 98 + 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 = 25 – 4 = 1 7 – 3 = 49 – 5 = 4 8 – 6 = 212 – 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 725 = e 2 ngā tekau me ngā tahi e 532 = e 3 ngā tekau me ngā tahi e 249 = 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**

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| 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**

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| 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 $\frac{1}{2}$ o tētahi porowhita;• ko te $\frac{1}{4}$ 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**

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| 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 te7 + 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 + ☐ = 1115 + ☐ = 1967 + ☐ = 7289 + ☐ = 96E 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 – ☐ = 924 – ☐ = 1967 – ☐ = 5894 – ☐ = 89E 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 heiwhakaoti 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 – ☐ = 2427 + ☐ = 5736 + ☐ = 7694 – ☐ = 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**

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| 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, 82 × 7 → 2, 4, 6, 8, 10, 12, 145 × 3 → 5, 10, 155 × 8 → 5, 10, 15, 20, 25, 30, 35, 4010 × 6 → 10, 20, 30, 40, 50, 604 × 5 → 2, 4, 6, 8, 10, 12, 14, 16, 18, 204 × 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 = 520 ÷ 4 = 514 ÷ 2 = 7 9 ÷ 3 = 312 ÷ 4 = 3 15 ÷ 3 = 525 ÷ 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**

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| 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 kiawhai 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. | $\frac{1}{2}$ o te 14 = ☐$\frac{1}{4}$ o te 12 = ☐$\frac{1}{8}$ o te 24 = ☐$\frac{1}{3}$ o te 15 = ☐$\frac{1}{5}$ 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**

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| 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 rimahei 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**

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| 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**

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| 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 $\frac{1}{4}$, te $\frac{3}{4}$ me te $\frac{5}{4}$. |  |
| 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: $\frac{1}{4} $o te 16 → 8 + 8 = 16, 4 + 4 = 8 |  $\frac{1}{2} $o te 8 = ☐ $\frac{1}{4} $o te 12 = ☐ $\frac{1}{4} $o te 20 = ☐ $\frac{1}{8} $o te 24 = ☐ $\frac{1}{3} $o te 15 = ☐ $\frac{1}{5} $o te 25 = ☐ | *TPT, Pukapuka 7:*• Ngā kōrero whakataki mō te Kaupae 4-5 (wh.23)• Kararehe (wh.28)• Manu Hiakai (wh.36)*Ngā Rauemi o te BSM:* 12-3-49, 12-3-50*He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 2:* • He Huripoki Hautau (wh.17)• A Keri te Kurī (wh.19)• He Reka ngā Kai (wh.20) |
|  |  | *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 2:* • Kia Manawareka te Katoa (wh.20)• Te Kimi i ngā Hautau (wh.24)*He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:* • Te Hautau Ka Mau (wh.21) |
| Ka whiriwhiria ngā hautanga waetahi o ngā āhua me ngā inenga roa, mā te whakahaurua. | Ka whiriwhiria te$ \frac{1}{ 2}$, te $\frac{1}{ 4}$, te $\frac{1}{ 8}$ me te $\frac{1}{ 16}$ o tētahi porowhita, tapawhā hāngai, ngaku pepa …Ka whiriwhiria te $\frac{1}{3}$, te $\frac{1}{5}$ me te $\frac{1}{10}$ otētahi 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 $\frac{1}{2}$ me te $\frac{1}{3}$ te $\frac{1}{8}$ me te $\frac{1}{4}$ te $\frac{1}{5}$ me te $\frac{1}{3}$ te $\frac{1}{8}$ me te $\frac{1}{12}$ te $\frac{1}{17}$ me te $\frac{1}{15}$ te $\frac{1}{100}$ me te $\frac{1}{99}$ te $\frac{2}{4}$ me te $\frac{3}{4}$ te $\frac{5}{8}$ me te $\frac{3}{8}$ te $\frac{5}{3}$ me te $\frac{2}{3}$ te $\frac{7}{10}$ me te $\frac{9}{10}$  | *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 $\frac{5}{3}$ me te $\frac{7}{4}$. 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 $\frac{2}{3}$ me te $\frac{4}{5}$ te $\frac{3}{4}$ me te $\frac{3}{8}$ te $\frac{5}{2}$ me te $\frac{9}{4}$ te $\frac{6}{10}$ me te $\frac{3}{5}$ te $\frac{1}{2}$ me te $\frac{5}{12}$ te $\frac{25}{5}$ me te $\frac{25}{4 }$  | *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**

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| 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 33.1 (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 ite 65 – 8 = ☐;ko te whiriwhiri i te tau tango,pērā i te 65 – ☐ = 57;ko te whiriwhiri i te tautīmatanga, 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 + ☐ = 4383 – 76 = ☐ → 76 + ☐ = 8391 – 68 = ☐ → 68 + ☐ = 91203 – 187 = ☐ → 187 + ☐ = 203783 – 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 + 3893 – 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**

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| 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 mete 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**

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| 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: $\frac{1}{3}$ o te 21 = 7 nā te mea 7 × 3 = 21. |  $\frac{1}{4}$ o te 24 = ☐ $\frac{1}{5}$ o te 40 = ☐ $\frac{1}{3}$ o te 27 = ☐ $\frac{3}{4}$ o te 20 = ☐ $\frac{2}{5}$ o te 30 = ☐ $\frac{3}{10}$ 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:$\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{7}{8}$, $\frac{1}{16}$, $\frac{5}{16}$…Whakaaturia ēnei hautanga o tētahi āhua:$\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$, $\frac{1}{6}$, $\frac{2}{6}$, $\frac{5}{6}$, $\frac{1}{12}$, $\frac{5}{12}$, $\frac{8}{12}$…Whakaaturia ēnei hautanga o tētahi āhua:$\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$, $\frac{1}{10}$, $\frac{3}{10}$… | *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:$\frac{1}{4}$ te maha o ngā kei roto i te 5 →5 ÷ $\frac{1}{4}$  | 3 ÷$ \frac{1}{4}$ = ☐2 ÷$ \frac{1}{5}$ = ☐4 ÷$ \frac{1}{3}$ = ☐5 ÷$ \frac{1}{10}$ = ☐10 ÷$ \frac{1}{8}$ = ☐7 ÷$ \frac{1}{100}$ = ☐ |  |

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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**

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| 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 ngātau 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 anate 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 atēnā 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**

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| 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 × 327 × 7 = ☐ → 20 × 7 + 7 × 753 × 9 = ☐ → 50 × 9 + 3 × 936 × 8 = ☐ → 30 × 8 + 6 × 8217 × 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 × 499 × 6 = ☐ → 100 × 6 – 1 × 648 × 7 = ☐ → 50 × 7 – 2 × 747 × 8 = ☐ → 50 × 8 – 3 × 8248 × 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 = 2410 × 12 = ☐, nō reira, 5 × ☐ = 120☐ × 6 = 1208 × 9 = ☐, nō reira, ☐ × 3 = 724 × ☐ = 724 × 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 = 4135 ÷ 5 = ☐ → 100 ÷ 5 = 20 me te 35 ÷ 5 = 7189 ÷ 3 = ☐ → 180 ÷ 3 = 60 me te 9 ÷ 3 = 3414 ÷ 9 = ☐ → 360 ÷ 9 = 40 me te 54 ÷ 9 = 6296 ÷ 8 = ☐ → 240 ÷ 8 = 30 me te 56 ÷ 8 = 7318 ÷ 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 × 448 × 57 = ☐ → 2 × 2 × 2 × 5712 × 23 = ☐ → 2 × 2 × 3 × 2372 ÷ 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 t238 ÷ 4 = 9.538 ÷ 4 = 9$\frac{1}{2}$ | 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, 6,664He taurea ēnei o te 3 me te 9? 72, 144, 267, 496, 1,002He 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**

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| 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 matiā-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: $\frac{3}{4}$ = $\frac{15}{20}$, mā te wāwāhi i ia hauwhā kia 5 ngā wehenga ōrite. | Wāwāhia te $\frac{1}{3}$ kia 4 ngā wehenga ōrite. He aha te hautau ōrite? ($\frac{1}{3}$ = $\frac{4}{12}$)Wāwāhia te $\frac{1}{5}$ kia 3 ngā wehenga ōrite. He aha te hautau ōrite? ($\frac{1}{5}$ = $\frac{3}{15}$)Wāwāhia te $\frac{1}{6}$ kia 2 ngā wehenga ōrite. He aha te hautau ōrite? ($\frac{1}{6}$ = $\frac{2}{12}$)Wāwāhia te $\frac{1}{2}$ kia 6 ngā wehenga ōrite. He aha te hautau ōrite? ($\frac{1}{2}$ = $\frac{6}{12}$) | *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) |
|  | $\frac{1}{4}$ = $\frac{☐}{16}$ $\frac{1}{6}$ = $\frac{☐}{36}$ $\frac{3}{4}$ = $\frac{☐}{28}$$\frac{3}{5}$ = $\frac{9}{☐}$ $\frac{7}{8}$ = $\frac{28}{☐}$ $\frac{9}{10}$ = $\frac{☐}{1,000}$ | *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: $\frac{2}{5}$ < $\frac{7}{16}$ nā te mea $\frac{2}{5}$ = $\frac{4}{10}$, ā, $\frac{1}{10}$ te itinga ake o tērā i te $\frac{1}{2}$, engari $\frac{1}{16}$ te itinga ake o te $\frac{7}{16}$ i te $\frac{1}{2}$. | Ko tēhea te hautau rahi ake? He pēhea nei te rahinga ake?te $\frac{3}{4}$, te $\frac{2}{3}$ rāneite $\frac{4}{5}$, te $\frac{3}{4}$ rāneite $\frac{5}{8}$, te $\frac{2}{3}$ rāneite $\frac{5}{8}$, te $\frac{7}{12}$ rāneite $\frac{3}{8}$, te $\frac{4}{10}$ rāneite $\frac{5}{6}$, te $\frac{3}{4}$ rāneite $\frac{17}{12}$, te $\frac{5}{4}$ rāneite $\frac{7}{3}$, te $\frac{11}{5}$ 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: $\frac{2}{3} $o te 36 = 2 × $\frac{1}{3}$ o te 36 = 2 × 36 ÷ 3 = 2 × 12 = 24 |  $\frac{3}{5} $o te 60 = ☐ $\frac{5}{8} $o te 64 = ☐ $\frac{5}{6} $o te 42 = ☐ $\frac{4}{7} $o te 56 = ☐ $\frac{3}{5} $o te ☐ = 27 $\frac{4}{9} $o te ☐ = 16 $\frac{7}{10} $o te ☐ = 84 $\frac{☐}{8} $o te 72 = 27 $\frac{☐}{12} $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:$\frac{2}{3} $× $\frac{3}{4} $= $\frac{6}{12} $= $\frac{1}{2} $ |  $\frac{1}{2} $× $\frac{3}{4} $= ☐  $\frac{2}{3} $× $\frac{3}{5} $= ☐ $\frac{3}{4} $× $\frac{2}{5} $= ☐  $\frac{5}{8} $× $\frac{1}{2} $= ☐ $\frac{2}{3} $× $\frac{1}{5} $= ☐  $\frac{5}{6} $× $\frac{2}{3} $= ☐ | *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 ÷ ☐ = $\frac{1}{7}$ 7 ÷ ☐ = $\frac{21}{3}$2 ÷ ☐ = $\frac{2}{5}$ 17 ÷ ☐ = 1$\frac{7}{10}$ ☐ ÷ 3 = 3$\frac{1}{3}$ ☐ ÷ 5 = 1$\frac{4}{5}$☐ ÷ 6 = 1$\frac{5}{6}$ ☐ ÷ 9 = 4$\frac{8}{9}$ | *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$\frac{1}{2}$ = 1.5 = 150%5 ÷ 4 = 1$\frac{1}{4}$ = 1.25 = 125%3 ÷ 8 = $\frac{3}{8}$ = 0.375 = 37.5%2 ÷ 3 = $\frac{2}{3}$ = 0.6 = 66.6%$\frac{7}{5}$ = 1$\frac{2}{5}$ = 1.4 = 140%$\frac{5}{7} $= ☐ | *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 4850% o te 64 ↔ 25% o te 6410% o te 28 ↔ 5% o te 2850% o te 56, 10% o te 56 ↔ 60% o te 5610% o te 35, 5% o te 35 ↔ 15% o te 3550% 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) |
|   | $\frac{3}{4} $+ $\frac{3}{4} $= $\frac{6}{4} $= 1$\frac{1}{2} $ $\frac{2}{3} $+$ \frac{4}{3} $= $\frac{6}{3} $= 2$\frac{4}{5} $– $\frac{2}{5} $= $\frac{2}{5} $$\frac{3}{4} $+ $\frac{5}{8} $= $\frac{11}{8} $= 1$\frac{3}{8} $$\frac{9}{10} $– $\frac{3}{5} $= $\frac{3}{10} $ $\frac{2}{3} $+ $\frac{5}{6} $= $\frac{9}{6} $= 1$\frac{1}{2} $ $\frac{7}{8} $– $\frac{1}{2} $= $\frac{3}{8} $  | *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 = 40.75 + 1.25 = 25 – 2.25 = 2.750.5 + 1.25 = 1.752.5 – 1.75 = 0.750.375 + 1.625 = 23 – 0.001 = 2.9992.673 + 1.327 = 45.2 – 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$\frac{1}{2} $÷$ \frac{1}{6} $= $\frac{9}{6} $÷ $\frac{1}{6} $= 9 | E hia ngā:$\frac{1}{4} $kei roto i te $\frac{3}{2} $ ($\frac{3}{2} $÷ $\frac{1}{4} $= $\frac{6}{4} $÷ $\frac{1}{4}$ = 6)$\frac{1}{10} $kei roto i te $\frac{4}{5} $($\frac{4}{5} $÷ $\frac{1}{10} $=$ \frac{8}{10} $÷ $\frac{1}{10} $= 8)$\frac{1}{6} $kei roto i te $\frac{5}{3} $($\frac{5}{3} $÷ $\frac{1}{6} $= $\frac{10}{6} $÷ $\frac{1}{6} $= 10)$\frac{3}{4} $kei roto i te 4$\frac{1}{2} $($\frac{9}{2} $÷ $\frac{3}{4} $= $\frac{18}{4} $÷ $\frac{3}{4} $= 6)$\frac{3}{8} $kei roto i te $\frac{9}{4} $($\frac{9}{4}$ ÷ $\frac{3}{8}$ = $\frac{18}{8}$ ÷ $\frac{3}{8}$ = 6)$\frac{5}{12}$ kei roto i te $\frac{10}{3}$ ($\frac{10}{3}$ ÷ $\frac{5}{12}$ = $\frac{40}{12}$ ÷ $\frac{5}{12}$ = 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, 0.67Tuhia 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 $\frac{1}{2}$kg me te utu i te $21 mō te 1$\frac{1}{2}$kg. | Te hoko waiārani:E $4 mō te 1 rita = $32 mō te 8 ritaE $7 mō te 2 rita = $35 mō te 10 ritaE $3 mō te $\frac{1}{2}$ rita = $18 mō te 3 ritaE $9 mō te 1$\frac{1}{2}$ rita = $36 mō te 6 ritaE $5 mō te $\frac{3}{4}$ 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: $\frac{16}{24} $= $\frac{8}{12}$ = $\frac{4}{6}$ = $\frac{2}{3}$ | 10:15 = 2:3 ↔$ \frac{10}{25}$ = $\frac{2}{5}$20:10 = 10:5 = 2:1 ↔ $\frac{20}{30}$ = $\frac{10}{15}$ = $\frac{2}{3}$12:36 = 6:18 = 3:9 = 1:3 ↔ $\frac{12}{48}$ = $\frac{6}{24}$ = $\frac{3}{12} $= $\frac{1}{4}$18:27 = 6:9 = 2:3 ↔ $\frac{18}{45}$ = $\frac{6}{15}$ = $\frac{2}{5}$45:15 = 9:3 = 3:1 ↔ $\frac{45}{60}$ = $\frac{9}{12}$ = $\frac{3}{4}$16:48 = 8:24 = 4:12 = 2:6 = 1:3 ↔ $\frac{16}{64} $=$ \frac{8}{32}$ = $\frac{4}{16}$ = $\frac{2}{8}$ = $\frac{1}{4}$ | *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**

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| 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 ngātau 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 tetauoti, 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 = 2727 × 243 = ☐ → 33 × 35 = 38642 = ☐ → 43 × 43 = 4682 = 64 → √64 = ☐ 302 = 900 → √900 = ☐53 = 125 → $\sqrt[3]{125}$ = ☐ | *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 = 732.4 × ☐ = 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 = 1,500196 × 14 ≈ 200 × 14 = 2,8002,718 ÷ 9 ≈ 2,700 ÷ 10 = 273,283 ÷ 49 ≈ 3,300 ÷ 50 = 4,9667.7 × 4.3 ≈ 8 × 4 = 3257.6 ÷ 8.2 ≈ 56 ÷ 8 = 7591.61 ÷ 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**

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| 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 ↔$ \frac{1}{3} $= 33$\frac{1}{3}$%  | Ko ngā ranunga wai ārani hei horopaki:6:9 = 16:24 = 2:36:9 ↔ $\frac{2}{5} $= 40%8:24 = 12:36 = 1:38:24 ↔ $\frac{8}{32} $= $\frac{1}{4} $ 25%20:12 = 45:27 = 5:320:12 ↔ $\frac{20}{32} $= $\frac{3}{8} $= 62.5%9:12 = 3:4 = 15:209:12 ↔ $\frac{9}{21} $= $\frac{3}{7} $= 42.86%28:35 = 4:528:35 ↔ $\frac{28}{63} $= $\frac{4}{9} $= 44.4% | *TPT, Pukapuka 7:*• Ngā kōrero whakataki mō te Kaupae 7-8 (wh.93)• Ringa Tītere Hikohiko (wh.98)• Ranunga Peita Hikohiko (wh.105) |
| Ka tāpiri, ka tango hautau e whai wāhi mai ana te tau hanumi me te tauraro rerekē. Hei tauira:$\frac{2}{3} $+ $\frac{3}{4} $= $\frac{17}{12} $= 1$\frac{5}{12} $  | $\frac{3}{5} $+ $\frac{2}{3} $= $\frac{19}{15} $= 1$\frac{4}{15} $$\frac{7}{8} $– $\frac{5}{12} $= $\frac{11}{24} $ $\frac{3}{8} $+ $\frac{5}{6} $= $\frac{29}{24} $= 1$\frac{5}{24} $$\frac{14}{10} $– $\frac{3}{4} $= $\frac{13}{20} $$\frac{3}{4} $+ $\frac{3}{7} $= $\frac{33}{28} $= 1$\frac{5}{28} $$\frac{7}{3} $– $\frac{7}{11} $= $\frac{56}{33} $= 1$\frac{23}{33} $ | *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 ÷$ \frac{2}{3} $=$ \frac{12}{3} $÷$ \frac{2}{3} $= 6 |  | *TPT, Pukapuka 8:*• Te Whakawehe Hautau Uaua (wh.64)• He Whakanui, he Whakaiti rānei te Whakawehe? (wh.70) |
| Ka whakatau tata, ka whakamahi hautanga māmā e mōhiotia ana, hei whakaoti rapanga e whai wāhi mai ana te whakarea me te whakawehe tau ā-ira. Hei tauira:0.4 × 2.8 = 1.12 (0.4 <$ \frac{1}{2}$)8.1 ÷ 0.3 = 27 (81 ÷ 3) | 3.2 × 0.3 = 0.960.72 × 8 = 5.760.25 × 2.4 = 0.615 × 0.33 = 4.955.6 ÷ 0.7 = 84.8 ÷ 1.5 = 3.27.2 ÷ 0.36 = 200.9 ÷ 0.03 = 3024 ÷ 36 = 0.66 | *TPT, Pukapuka 7:*• Te Whētui Hautau, Tau ā-Ira (wh.108)*TPT, Pukapuka 8:*• Te Whakatau Tata (wh.72)• Te Whakarea Hautanga ā-Ira (wh.100)*He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:* • Te Whakapaipai i te Rūma Moe (wh.6)• Te Pakeke Haere i Tuarangi (wh.8)• Ka Pai te Mātaitai Parai (wh.9)*He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:* • Kia Tika te Tapatapahi i te Tōtiti (wh.14) |
| Ka whakamahi tauwehe pātahi, me te pāpātanga waetahi hei whakaoti rapanga pāpātanga. Hei tauira:490km i te 14 haora → 35km/h (mā te whakawehe ki te 7 kātahi ki te 2). | Ko te horoi motukā, ko te kato huarākau, ko te tawhiti o te haere i te wā hei horopaki:18 i te ono haora, nō reira, e hia i te 15 haora? (18:6 = 45:15)14:21 = 20:30 = 6:9 56:16 = 21:6 = 7:228:12 = 49:21 = 7:3 27:36 = 12:16 = 3:4 | *TPT, Pukapuka 7:*• Te Pāpātanga (wh.121) |
| Ka whakaoti rapanga whakawehe e whai wāhi mai ana te otinga hautanga. Ka whakaaturia te toenga hei hautau, hei tau ā-ira rānei, i runga anō i te horopaki o te rapanga. Hei tauira:19 ÷ 8 = 2, toenga 3 = 2$\frac{3}{8} $= 2.375 | 30 ÷ 4 = 7 t2 = 7$\frac{1}{2} $= 7.517 ÷ 3 = 5 t2 = 5$\frac{2}{3} $= 5.$\dot{6}$43 ÷ 5 = 8 t3 = 8$\frac{3}{5} $= 8.6157 ÷ 10 = 15 t7 = 15$\frac{7}{10} $= 15.790 ÷ 8 = 11 t2 = 11$\frac{1}{4} $= 11.2558 ÷ 6 = 9 t4 = 9$\frac{2}{3} $= 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 →$ \frac{1}{3} $→ 33$\frac{1}{3}$% | 5:6 ⊕ 7:12 = 12:18 = 2:39:4 ⊕ 7:6 = 16:10 = 8:52:3 ⊕ 12:11 = 14:14 = 1:18:5 ⊕ 7:5 = 15:10 = 3:27:2 ⊕ 9:4 = 16:6 = 8:32:5 ⊕ 2:5 ⊕ 8:5 = 12:15 = 4:57:3 ⊕ 7:3 ⊕ 7:3 ⊕ 3:7 = 24:16 = 3:21:3 ⊕ 1:3 ⊕ 4:5 ⊕ 4:5 ⊕ 4:5 = 14:21 = 2:3 | *TPT, Pukapuka 8:*• Te Ōwehenga me te Hautanga hei Tikanga Tohatoha (wh.112) |
| Ka whiriwhiria ngā hautau keiwaenganui i ētahi hautau e rua, mā te whakamahi hautanga ōrite, mā te huri hei tau ā-ira, hei ōrau rānei, mā te whakamahi rānei i ngā hautau māmā e mōhiotia ana. Hei tauira:$\frac{3}{5}$ < $\frac{9\frac{1}{2}}{15}$ < $\frac{2}{3}$, $\frac{9\frac{1}{2}}{15}$ = $\frac{19}{30}$  | 10% o te 48 ↔ 30% o te 4850% o te 64 ↔ 25% o te 64Whiriwhiria he hautau kei waenganui i ēnei:te $\frac{2}{5}$ me te $\frac{1}{2}$ te $\frac{1}{4}$ me te $\frac{3}{10}$ te $\frac{3}{4}$ me te $\frac{4}{5}$ te $\frac{3}{5}$ me te $\frac{7}{12}$ te $\frac{5}{8}$ me te $\frac{7}{12}$ te $\frac{7}{8}$ me te $\frac{9}{10}$ te $\frac{5}{4}$ me te $\frac{6}{5}$ te $\frac{3}{7}$ me te $\frac{4}{9}$ te $\frac{8}{9}$ me te $\frac{9}{10}$ te $\frac{3}{4}$ me te $\frac{7}{11}$  | *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:$\frac{3}{4}$ ÷ $\frac{2}{3}$ = $\frac{9}{12}$ ÷ $\frac{8}{12}$ = 1$\frac{1}{8}$  | $\frac{7}{8}$ ÷ $\frac{1}{4}$ = $\frac{7}{8}$ ÷ $\frac{2}{8}$ = $\frac{7}{2}$ = 3$\frac{1}{2}$ $\frac{4}{5}$ ÷ $\frac{1}{2}$ = $\frac{8}{10}$ ÷$ \frac{5}{10}$ = $\frac{8}{5}$ = 1$\frac{3}{5}$ $\frac{9}{10}$ ÷ $\frac{3}{4}$ = $\frac{18}{20}$ ÷ $\frac{15}{20}$ = $\frac{18}{15}$ = 1$\frac{1}{5}$ $\frac{7}{8}$ ÷ $\frac{2}{3}$ = $\frac{21}{24}$ ÷ $\frac{16}{24}$ = $\frac{21}{16}$ = 1$\frac{5}{16}$ $\frac{1}{4}$ ÷ $\frac{2}{5}$ = $\frac{5}{20}$ ÷ $\frac{8}{20}$ = $\frac{5}{8}$ $\frac{3}{10}$ ÷ $\frac{3}{4}$ = $\frac{6}{20}$ ÷ $\frac{15}{20}$ = $\frac{6}{15}$ = $\frac{2}{5}$  | *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 $\frac{30,000}{240,000}$ 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$256,000 → 332,000 = 29.7% te whakapikinga | *TPT, Pukapuka 8:*• Tātaitanga Ōrau (wh.73)• Te Whakatau Tata i te Ōrau (wh.74) |
| Ka whakatau tata, ka whakaoti i ngā rapanga ōrau, e whai wāhi mai ana te tauoti, te tau ā-ira rānei. Hei tauira:E 35 o ngā tītere 56 a Hinewai i ū. E hia te ōrau o ana tītere i ū? | 25% o te 64 = 1680% o te 45 = 3635% o te 24 = 8.465% o te 36 = 23.458% o te 82 ≈ 60% o te 80 = 48 (ko te 47.56 te otinga tōtika)77% o te 38 ≈ 75% o te 40 = 30 (ko te 29.26 te otinga tōtika)32 o roto i te 48 ≈ 32 o roto i te 50 = 64% (ko te 66.6% te ōrau tōtika)32 o roto i te 39 ≈ 32 o roto i te 40 = 80% (ko te 82% te ōrau tōtika)22 o roto i te 29 ≈ 22 o roto i te 30 = 3$\frac{1}{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, heimatapae 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, 70Whiriwhiria 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?$\frac{3}{15}$ = 0.2$\frac{5}{15}$ = 0.3$\dot{3}$$\frac{9}{18}$ = 0.5$\frac{2}{18} $= 0.1$\dot{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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