Ngā Whāinga Paetae: **Te Tau, Taumata 4**

Mahere Tau	0	1	2	3	4	5	6	7	8
							6	7	

4.1 (Mātauranga Tau)

Ka mōhio ki: ngā meka whakawehe matua; te whakaawhiwhi tauoti, tau ā-ira hoki.

4.2 (Mātauranga Tau)

Ka mōhio ki ngā tikanga o: te tau tōraro me te tau tōrunga; te tau toitū; te ōwehenga; te uara tū o ngā tau ā-ira; te maha o ngā haumano, ngā haurau, ngā hautekau, ngā tahi, ngā tekau, ngā rau me ngā mano kei roto i tētahi tau ā-ira (tae atu kia 3 ngā mati ā-ira).

4.3 (Mātauranga Tau)

Ka mōhio ki te kimi mai i ngā taurea me ngā tauwehe o tētahi tau.

4.4 (Mātauranga Tau)

Ka mōhio ki ngā hautau, ngā tau ā-ira, ngā ōrau me ngā ōwehenga māmā: ngā huringa hautau ↔ tau ā-ira ↔ ōrau; ngā raupapa tatauranga tau ā-ira (haumano, haurau, hautekau); te raupapa hautau, tau ā-ira, ōrau hoki; te whiriwhiri hautau ōrite.

4.5 (Rautaki Tau)

Ka kōwhiri, ka whakamārama i te rautaki e tino whaihua ana hei whakaoti rapanga e whai wāhi mai ana te tauoti, te hautau, te tau ā-ira, te ōrau, te ōwehenga, te tau tōpū me te taupū māmā: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite māmā.

4.6 (Rautaki Tau)

Ka mārama ki te whaitakenga o te otinga o tētahi rapanga.

Te Mātauranga	Ngā Rauemi e Hāngai ana
Ka raupapahia ngā tau ā-ira, kia toru ngā mati ā-ira. Hei tauira: 6.25 < 6.3	*TPT, Pukapuka 4:* • Kōwhiuwhiu Tau (wh.36) • He Whare Uara Tū (wh.38) • Ko Wai ka Toa? (wh.48) • Te Hautanga ā-Ira (wh.63) • Hautau Ōrite Huhua (wh.73) *He Tau Anō Te Tau: Te Tau, Taumata 3:* • Te Tātai Tau ā-ira (wh.15) *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3:* • He Tārai Tauākī (wh.20)
Ka raupapahia ngā hautau, pērā i ngā haurua, ngā hautoru, ngā hauwhā, ngā haurima me ngā hautekau.	*TPT, Pukapuka 4:* • Raupapahia ngā Kāri (wh.10) • Raupapahia (wh.17) • He Aho Pirepire (wh.23) • Kei a Wai te Keke Nui? (wh.42) • Te Raupapa Hautau (wh.49) • Te Hautau ki te Papa Tīrau 1 (wh.56) • Te Hautau ki te Papa Tīrau 2 (wh.58) • Ngā Hautau Waetahi-kore (wh.59) • He Pākete Rare (wh.60) • Te Hautanga ā-Ira (wh.63) *He Tau Anō Te Tau: Ngā Tau, Taumata 2-3:* • Wāhanga Porohita (wh.17) • Hautau Hirahira (wh.18) • E Hia? (wh.20)

Ka mōhio ki ngā huringa hautau ↔ tau ā-ira ↔ ōrau mō ngā haurau, ngā hautoru, ngā hauwhā, ngā haurima me ngā hautekau.	*TPT, Pukapuka 4:* • Hautanga Ōrite (wh.51) • He Aho Pirepire (wh.23) *He Tau Anō Te Tau: Te Tau, Taumata 3:* • Te Hautau hei Tau ā-ira (wh.13) *He Tau Anō Te Tau: Te Tau, Taumata 3-4:* • Tirohia te Pepa (wh.11) *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:* • He Tūhonohono Hautau (wh.15) *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:* • Ai e Hika e! (wh.24) *He Tau Anō Te Tau: Ngā Meka Matua, Taumata 3-4:* • Te Whiriwhiri Tau ā-Ira (wh.21) • Te Toa Tau ā-Ira (wh.24)
Ka mōhio ki ngā hautau ōrite mō ngā haurua, ngā hautoru, ngā hauwhā, ngā haurima me ngā hautekau.	*TPT, Pukapuka 4:* • He Nui Ake te Hauwhā i te Haurua! (wh.44) • Ngā Hautanga ki te Rārangi Tau (wh.46) • Hautanga Ōrite (wh.51) • Hautau Ōrite Huhua (wh.73) *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatahi, Taumata 3:* • Ka Hau ngā Hautau (wh.9) • He Hautau Anō (wh.10) • Kei Ngoungou Haere (wh.11) *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3:* • He Rerekē, engari he Rite (wh.22) *He Tau Anō Te Tau: Te Tau, Pukapuka Tuarua, Taumata 3-4:* • He Hautau Hanawiti (wh.11)
Ka whakaawhiwhi tau ā-ira (tae atu kia rua ngā mati ā-ira), ki te tauoti, ki te hautekau rānei e pātata ana.	*TPT, Pukapuka 4:* • Whakaawhiwhinga Whaitake (wh.70) • Whakaawhiwhia ki te Tekau (wh.94) *He Tau Anō Te Tau: Te Tau, Pukapuka Tuatoru, Taumata 3-4:* • Hoea, Hoea Rā (wh.6)

Ngā Rautaki	Te Panuku o ngā Rapanga	Ngā Rauemi e Hāngai ana
Ka wāwāhi hautanga hei whiriwhiri hautau ōrite. Hei tauira: $\frac{3}{4} = \frac{15}{20}$, 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)

	$\frac{1}{4} = \frac{\square}{16}$ $\frac{1}{6} = \frac{\square}{36}$ $\frac{3}{4} = \frac{\square}{28}$ $\frac{3}{5} = \frac{9}{\square}$ $\frac{7}{8} = \frac{28}{\square}$ $\frac{9}{10} = \frac{\square}{1,000}$	*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 $\frac{2}{3}$ rānei te $\frac{4}{5}$, te $\frac{3}{4}$ rānei te $\frac{5}{8}$, te $\frac{2}{3}$ rānei te $\frac{5}{8}$, te $\frac{7}{12}$ rānei te $\frac{3}{8}$, te $\frac{4}{10}$ rānei te $\frac{5}{6}$, te $\frac{3}{4}$ rānei te $\frac{17}{12}$, te $\frac{5}{4}$ rānei te $\frac{7}{3}$, 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 $= 2 \times \frac{1}{3}$ o te 36
             $= 2 \times 36 \div 3$
             $= 2 \times 12$
             $= 24$
	$\frac{3}{5}$ o te 60 $= \square$
	 $\frac{5}{8}$ o te 64 $= \square$
	 $\frac{5}{6}$ o te 42 $= \square$
	 $\frac{4}{7}$ o te 56 $= \square$
	 $\frac{3}{5}$ o te $\square$ $= 27$
	 $\frac{4}{9}$ o te $\square$ $= 16$
	 $\frac{7}{10}$ o te $\square$ $= 84$
	 $\frac{\square}{8}$ o te 72 $= 27$
	 $\frac{\square}{12}$ 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)

Ka whakaoti rapanga e whai wāhi mai ana te whakareatanga hautau ki te hautau. Hei tauira: $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$	$\frac{1}{2} \times \frac{3}{4} = \square$ $\frac{2}{3} \times \frac{3}{5} = \square$ $\frac{3}{4} \times \frac{2}{5} = \square$ $\frac{5}{8} \times \frac{1}{2} = \square$ $\frac{2}{3} \times \frac{1}{5} = \square$ $\frac{5}{6} \times \frac{2}{3} = \square$	*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: $\frac{27}{4}$ $\frac{43}{5}$ $\frac{23}{3}$ $\frac{65}{9}$ $\frac{76}{8}$ $\frac{100}{3}$	*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: $8 \div 3 = 2\frac{2}{3}$ Ka tūhonoa te whakawehenga ki te taurunga me te tauraro o tētahi hautau. Hei tauira: $4 \div 5 = \frac{4}{5}$	$5 \div 4 = \square$ $8 \div 3 = \square$ $12 \div 5 = \square$ $5 \div 6 = \square$ $3 \div 7 = \square$ $13 \div 8 = \square$ $1 \div \square = \frac{1}{7}$ $7 \div \square = \frac{21}{3}$ $2 \div \square = \frac{2}{5}$ $17 \div \square = 1\frac{7}{10}$ $\square \div 3 = 3\frac{1}{3}$ $\square \div 5 = 1\frac{4}{5}$ $\square \div 6 = 1\frac{5}{6}$ $\square \div 9 = 4\frac{8}{9}$	*He Tau Anō Te Tau: Te Tau, Taumata 3:* • Te Hautau hei Tau ā-Ira (wh.13)
Ka whakaotia ngā huringa hautau $\leftrightarrow$ tau ā-ira $\leftrightarrow$ ōrau.	$3 \div 2 = 1\frac{1}{2} = 1.5 = 150\%$ $5 \div 4 = 1\frac{1}{4} = 1.25 = 125\%$ $3 \div 8 = \frac{3}{8} = 0.375 = 37.5\%$ $2 \div 3 = \frac{2}{3} = 0.6 = 66.6\%$ $\frac{7}{5} = 1\frac{2}{5} = 1.4 = 140\%$ $\frac{5}{7} = \square$	*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 $\leftrightarrow$ 30% o te 48 50% o te 64 $\leftrightarrow$ 25% o te 64 10% o te 28 $\leftrightarrow$ 5% o te 28 50% o te 56, 10% o te 56 $\leftrightarrow$ 60% o te 56 10% o te 35, 5% o te 35 $\leftrightarrow$ 15% o te 35 50% o te 140, 10% o te 140, 5% o te 140 $\leftrightarrow$ 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)

Ka whakaoti tāpiritanga hautau, tangohanga hautau hoki mēnā e whai pānga ana ngā tauraro. Hei tauira: $\frac{3}{4} + \frac{5}{12} = \frac{14}{12} = 1\frac{2}{12} = 1\frac{1}{6}$	$\frac{3}{4} + \frac{3}{4} = \frac{6}{4} = 1\frac{1}{2}$ $\frac{2}{3} + \frac{4}{3} = \frac{6}{3} = 2$ $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$ $\frac{3}{4} + \frac{5}{8} = \frac{11}{8} = 1\frac{3}{8}$ $\frac{9}{10} - \frac{3}{5} = \frac{3}{10}$ $\frac{2}{3} + \frac{5}{6} = \frac{9}{6} = 1\frac{1}{2}$ $\frac{7}{8} - \frac{1}{2} = \frac{3}{8}$	
Ka whakaoti rapanga e whai wāhi mai ana te tāpiri me te tango hautau.	1.2 + 3.8 = 4 0.75 + 1.25 = 2 5 - 2.25 = 2.75 0.5 + 1.25 = 1.75 2.5 - 1.75 = 0.75 0.375 + 1.625 = 2 3 - 0.001 = 2.999 2.673 + 1.327 = 4 5.2 - 1.68 = 3.52	
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 $1\frac{1}{2}$? $1\frac{1}{2} \div \frac{1}{6} = \frac{9}{6} \div \frac{1}{6} = 9$	E hia ngā: $\frac{1}{4}$ kei roto i te $\frac{3}{2}$ ($\frac{3}{2} \div \frac{1}{4} = \frac{6}{4} \div \frac{1}{4} = 6$) $\frac{1}{10}$ kei roto i te $\frac{4}{5}$ ($\frac{4}{5} \div \frac{1}{10} = \frac{8}{10} \div \frac{1}{10} = 8$) $\frac{1}{6}$ kei roto i te $\frac{5}{3}$ ($\frac{5}{3} \div \frac{1}{6} = \frac{10}{6} \div \frac{1}{6} = 10$) $\frac{3}{4}$ kei roto i te $4\frac{1}{2}$ ($\frac{9}{2} \div \frac{3}{4} = \frac{18}{4} \div \frac{3}{4} = 6$) $\frac{3}{8}$ kei roto i te $\frac{9}{4}$ ($\frac{9}{4} \div \frac{3}{8} = \frac{18}{8} \div \frac{3}{8} = 6$) $\frac{5}{12}$ kei roto i te $\frac{10}{3}$ ($\frac{10}{3} \div \frac{5}{12} = \frac{40}{12} \div \frac{5}{12} = 8$)	
Ka rauapapahia ngā tau ā-ira ki tētahi rārangi tau.	Tuhia he rārangi tau mai i te 0 ki te 5, ka whakaatu ai i ēnei: 2.5, 1.25, 4.9, 3.75, 0.67 Tuhia he rārangi tau mai i te 0 ki te 2, ka whakaatu ai i ēnei: 0.2, 1.8, 0.66, 1.95, 1.125	

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 rita E $7 mō te 2 rita = $35 mō te 10 rita E $3 mō te $\frac{1}{2}$ rita = $18 mō te 3 rita E $9 mō te $1\frac{1}{2}$ rita = $36 mō te 6 rita E $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: $\frac{16}{24} = \frac{8}{12} = \frac{4}{6} = \frac{2}{3}$	$10:15 = 2:3 \leftrightarrow \frac{10}{25} = \frac{2}{5}$ $20:10 = 10:5 = 2:1 \leftrightarrow \frac{20}{30} = \frac{10}{15} = \frac{2}{3}$ $12:36 = 6:18 = 3:9 = 1:3 \leftrightarrow \frac{12}{48} = \frac{6}{24} = \frac{3}{12} = \frac{1}{4}$ $18:27 = 6:9 = 2:3 \leftrightarrow \frac{18}{45} = \frac{6}{15} = \frac{2}{5}$ $45:15 = 9:3 = 3:1 \leftrightarrow \frac{45}{60} = \frac{9}{12} = \frac{3}{4}$ $16:48 = 8:24 = 4:12 = 2:6 = 1:3 \leftrightarrow \frac{16}{64} = \frac{8}{32} = \frac{4}{16} = \frac{2}{8} = \frac{1}{4}$	*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)