

Hei tātaihia te hiko a Tāwhirimātea

He Mahi Pāngarau

He mātauranga rauemi e pāhekoheko ana i waenganui te hunga Kenehi me te Rōpū Emirates o Aotearoa

Ka mahi ngātahi te hunga Kenehi me te Rōpū Emirates o Aotearoa hei whakarato i ngā rauemi mō ngā marautanga Pūtaiao, Hangarau, Mātai Pūhanga me te Pāngarau ki ngā kura i te tau toru tekau mā ono te āhuareka mō te Ipu o Amerika. Ko ngā kaiwhakahaere e rua mō tā rātou auahatanga tauira whakamāramatanga. Ko tētahi torohanga te mahi nei e pā ana te mahi “[Hei whakarataia te hiko a Tāwhirimātea](#)” hei ngā taumata 3-4.

Tirohanga whānui

Uiuitia me pēhea te kaha o te hau ka taea te whakaangi ngā waka o te Ipu o Amerika, te whakaawe o ratou tere. Inea ngā tawhiti e pā ana te raranga o te Ipu o Amerika.

Ngā hono ā-Marautanga: Te Marautanga o Aotearoa

Ngā Wāhanga Ako	Ngā Whāinga Paetae	Ngā Taumata	Ngā Tau
Pāngarau	<p>Te Tau me te Taurangi 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 ōwhehenga, te tau tōpū me te taupū māmā: rautaki tatau; rautaki tāpiripiri; rautaki whakarea; rautaki pānga riterite māmā.</p> <p>Ka whakaoti rapanga whaitake</p> <ul style="list-style-type: none"> ka kōwhiri, ka whakamahi i te waeine e hāngai ana mō te roa, te horahanga, te rōrahi (kītanga), te papatipu (taumaha), te paemahana, te koki me te wā; ka whakawhitiwhiti waeine māmā; ka whakamahi i ngā inenga tapa ki te whiriwhiri i te paenga me te horahanga o te tapawhā hāngai, me te rōrahi o te poro tapawhā hāngai; ka tuhi, ka whakamārama, ka whakamahi hoki i ngā momo wātaka me ngā mahere; ka mārama ki te whaitakenga o tētahi inenga. 	3-4	5-8



He Mōhioho Tāpiripiri

Ka whakarātata te kaha o Tāwhirimātea e ngā kōmaru hei whakaangi i te waka moana. Nā ngā whakaahua e hurihuria te pūngao hau ki te hiko mō tātou, mā te whakamahi ngā pūrere kapohau. Ka whakaawe te hau kia pēhea i māia ngā mahi o te waka moana me ngā pūrere kapohau.

Kia mau te ihi o Tāwhirimātea mō te Ipu o Amerika

E āhei ana kia pupuhi te hau me he whirikoka taurangi. He mahi hirahira ko te kaha o te hau hei whakaangi i te haere o te waka moana o te Rōpū Emirates o Aotearoa. Me kōrure ngā waka moana, me hūnuku ngā kōmaru hoki hei whānui ake te pūngao hau.

He aha tētahi māero moana?

Ko tētahi inenga o te tawhiti kei roto i te moana he māero moana, ā, ko te taiāwhiotanga o te ao te pūtake. He ōrite ki te māero moana ki 'te roanga kua haere i te ripoi meneti o te ahopae. E 1,852 mita o tētahi māero moana.

He aha tētahi pūtiki?

He tētahi inenga te nehehanga o te pūtiki, ā, he ōrite ki te kotahi māero moana ā-hāora (1 pūtiki = 1.85 kiromita ā-hāora). 10 pūtiki = 18.5 kiromita ā-hāora.

Te Āwhiotanga

Ko te āwhiotanga te roanga o te rārangi kōpani kei waho iho i tētahi āhua ahuru. Tāpiria ngā roanga o ngā taha kia whika te āwhiotanga o tētahi āhua ā taha tautika.

Tirohia te whakaaturanga kiriata mō te pūngao hau hei ako anō mō te pūngao moe, te pūngao neke kia pēhea te whītiki te mauri me te kaha o Tāwhirimātea e whakamahi ana ngā kōmaru me ngā kapohau.

Tirohia: <http://bit.ly/2VhtL4W>



I mōhio e koe?

Ka kōrure ngā kapohau me ngā kōmaru e whakaritea ā koki me tōna aranga hoki hei mau te hau e huri haere ana.

Ngā mahi tuatahi:

Te kaha o te hau me te Rōpū Emirates o Aotearoa

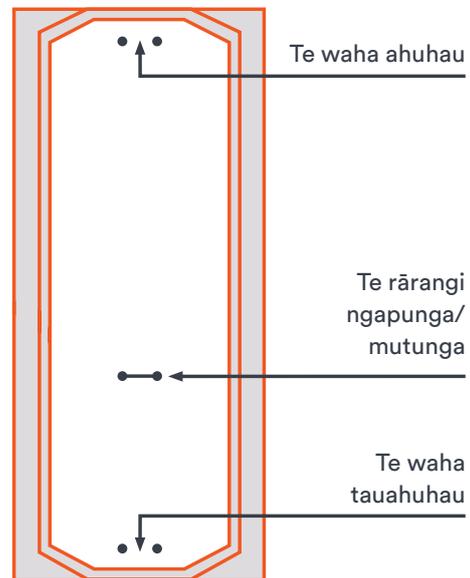
Arohia: Kia ngāwari ake tōu tātaitanga, ka whakamahia te mōrahi o te tere o nga waka moana e āhei ana te riro tōtuhi hei pūmau te angi whakamua te waka moana i te tere i ngā wā katoa o te raranga. He tika kāore e taea e te waka moana te rere ki te hau, te rere mutunga rawa i ngā wā katoa o te raranga nei, ā, ka whakaehu ahutanga tere nā te huringa o te aro me te hau hoki.

Ka mau te Ipu o Amerika ki Tāmaki Makaurau o Pou-tū-terangi i te tau 2021. E whakamāramahia ana te tūtohi kei raro nei i ngā tauira me pēhea ka whakaawe te tere o te hau i te tere waka moana. Te hoahoa: E whakamāramahia ana e “Te Raranga māori” (ki raro taha matau) tētahi āhua tauira o te raranga whakataetae.

Te tere hau me te mōrahi o ngā tere waka āheitanga	
Te tere hau (pūtiki)	Te mōrahi o te tere waka āheitanga (pūtiki) o te Rōpū Emirates o Aotearoa
8	29
12	37
16	43
20	44

Te raranga māori

2.2 māero moana ahuhau tauahuhau, ā, he pai a te 20 pūtiki



He tohu puaki

1 pūtiki = 1.85 kiromita ā-hāora

E rere ana tētahi waka moana a 1 pūtiki ka rere a 1,852 mita (1.8 kiromita) ā-hāora

37 pūtiki = 37 × 1.85 = 68.45 kiromita ā-hāora

Ngā Patapatai

1. Mehemea ko te tere o te hau te 12 pūtiki, he aha te mōrahi o te tere waka moana āhei ana te Rōpū Emirates o Aotearoa?
2. Mehemea ko te tere o te hau te 16 pūtiki, e hia ngā waka moana e āhei ana ki te rere ngā kiromita ā-hāora kia tere?
3. He aha te tawhiti ka rere tētahi waka moana a te 1 pūtiki i te 1 meneti?
4. Mehemea te raranga te 10 māero moana (MM), he aha te tere o te whakaangi ki mua e āhei ana te waka o te Rōpū Emirates o Aotearoa te whakaoti te raranga nei kia te tere ake te hau ki te 8 pūtiki?

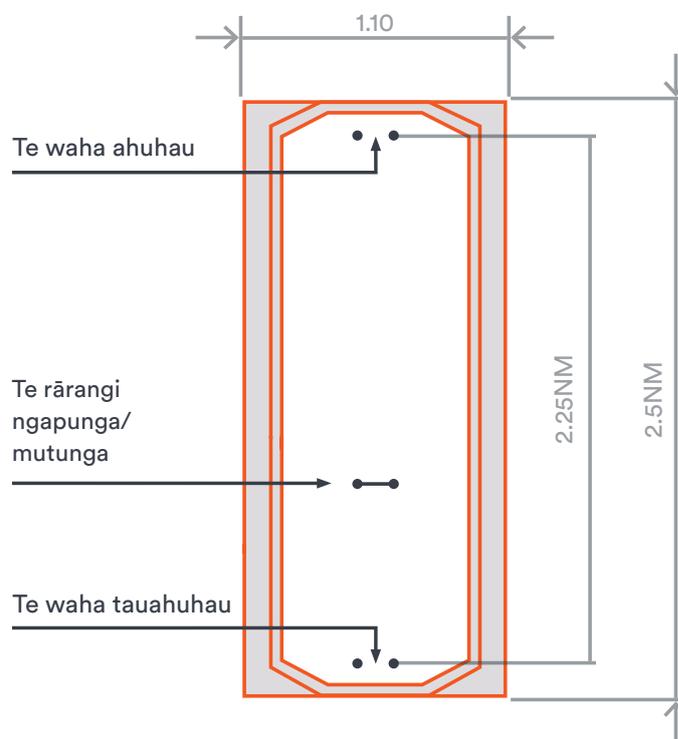
Ngā mahi tuarua:

Te whāroa o te raranga āwhiotanga mō te Ipu o Amerika

Ka mau te Ipu o Amerika kei Tāmaki Makaurau ā te Pou-tū-terangi i te tau 2021. He ōrite te raranga kei raro ki te raranga e whakamahi ana i te whakataetae o te Ipu o Amerika. Whakautua ngā pātai kei raro hei tātai koutou i ngā tawhiti āwhiwhiwhi mō te whakataetae. He māero moana ngā tawhiti.

Te raranga māori

2.2 māero moana ahuhau tauahuhau, he pai a te 20 pūtiki



Ngā Patapatai

1. He aha te tawhiti i te taha ahuhau ki te taha tauahuhau?
2. Whikaia te āwhiotanga āwhiwhiwhi o te raranga nei.
3. E hia ngā horahanga (i te māero moana pūrua) o te raranga nei?

Te Āwhiotanga

Ko te āwhiotanga te roanga o te rārangi kōpani kei waho i tētahi āhua ahurua. Tāpiria ngā roanga o ngā taha kia whika te āwhiotanga o tētahi āhua ā taha tautika.

Arohia: Kua whakangāwaritia te hoahoanga raranga kei runga nei hei whika noa atu. Kāore e whakarēre i ngā waka moana huri noa i te āwhiotanga, heoi anō, ka rere ngā waka moana i te raranga i waenganui te āwhiotanga. Ka rerekē ngā inenga e pā ana te wāhi me ngā āhua huarere. I a 1,852 mita tētahi māero moana.

Ngā whakautu mō **ngā mahi tauira**

Ngā mahi tuatahi: Te kaha o te hau me te Rōpū Emirates o Aotearoa

Ngā Whakautu

1. 37 pūtiki
2. 43 pūtiki, he ōrite ki te $44 \times 1.85 = 79.55$ kiromita ā-hāora
3. Whakawehea 1,852 mita ki te 60 (meneti), ka 30.86 mita.
4. Ko te 10MM te roanga o te raranga, he ōrite ki te 18.5 kiromita. Ko te 29 pūtiki, e 53.7 kiromita ā-hāora rānei te tere o te waka moana mutunga rawa. Nā reira ka taea te waka te rere mutunga rawa e 0.895 kiromita ā-meneti ($53.7/60$), ā, i konā, ko te wā hei piki ake te whakahohoro te whakawehea ana te 18.5 ki te 8.895, ka 20.67 meneti.

(Arohia: Te wā e kore taea ana te hikina kia tere nei nā ngā momo āhuatanga o te rangi ka whakaehu ngā koki hau, me ētahi atu mea. Kei te waiho rānei hei whika kia māmā noa)

Ngā mahi tuarua: Te whāroa o te raranga āwhiotanga mō te Ipu o Amerika

Ngā Whakautu

1. Te 2.25MM (māero moana) āwhiwhiwhi.
2. Te āwhiotanga āwhiwhiwhi o te raranga = $1.1\text{MM} + 2.5\text{MM} + 1.1\text{MM} + 2.5\text{MM} = 7.2\text{MM}$ (māero moana). He ōrite tēnei ki te 13,334 mita, te 13.3 kiromita rānei.
3. Te horahanga o te raranga: $1.1\text{MM} \times 2.5\text{MM} = 2.75\text{MM}^2$