Ihumanea Pāngarau

Porowhita Rāwaho, Porowhita Rāroto
MĀ TE KAIAKO

Kia Mōhio te Ākonga ki:

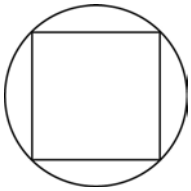
- te whakamahi taputapu tā, pēnei i te tāporowhita me te rūri
- te ture a Pythagoras

Kupu Matua:

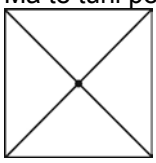
tāporowhita, pānga, pūtoro, porowhita rāwaho, porowhita rāroto

Hei Mahi:

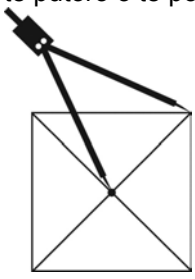
1. Māu e tuhi tētahi tapawhā rite me tōna porowhita rāwaho.



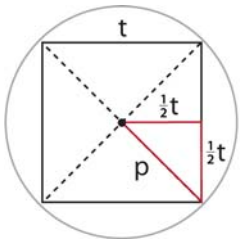
2. He aha tō mahi hei kimi i te pū o te porowhita?
   Mā te tuhi pea i ngā hauroki:



3. He aha koe i mōhio ai ki te pūtoro o te porowhita?
   Ka poua te tāporowhita ki te pū, ka whātoroa atu ki tētahi kokonga o te tapawhā rite. Koia te pūtoro o te porowhita rāwaho.



4. Tūhuratia te pānga o te pūtoro o te porowhita me te tapa o te tapawhā rite.
   Ka whakamahia te ture a Pythagoras:



t = tapa
p = pūtoro

$p = \sqrt{(\frac{1}{2}t)^2 + (\frac{1}{2}t)^2}$

5. Mēnā e 2cm te tapa o te tapawhā rite, he aha te huarahi hei tātai i te pūtoro o te porowhita?
   Ka whakaurua te 2 ki te whārite:
   $p = \sqrt{(\frac{1}{2}t)^2+(\frac{1}{2}t)^2}$

   $= \sqrt{1^2+1^2}$

   $= \sqrt{2}$

   $= 1.41\ (2\ mi)$

6. Mēnā ka rearuatia te tapa o te tapawhā rite (arā, tapa = 4cm) ka rearuatia anō te pūtoro o te porowhita? Whakamāramatia mai.
   Tuatahi, ka whakaurua te 4 ki te whārite:
   $p = \sqrt{(\frac{1}{2}t)^2+(\frac{1}{2}t)^2}$

   $= \sqrt{2^2+2^2}$

   $= \sqrt{8}$

   $= 2.83\ (2\ mi)$

   Kātahi ka whakatairite i ngā tapa me ngā pūtoro:

tapa	pūtoro
2	1.41 (2mi)
4	2.83 (2mi)

   Te āhua nei, e tika ana. Mēnā ka rearuatia te tapa, ka rearuatia anō te pūtoro. Me whakamātau anō tētahi tapa (ko te 8):
   $p = \sqrt{(\frac{1}{2}t)^2+(\frac{1}{2}t)^2}$

   $= \sqrt{4^2+4^2}$

   $= \sqrt{32}$

   $= 5.66\ (2\ mi)$

   Ko te whakatairite anō i ngā tapa me ngā pūtoro:

tapa	pūtoro
2	1.41 (2mi)
4	2.83 (2mi)
8	5.66 (2mi)