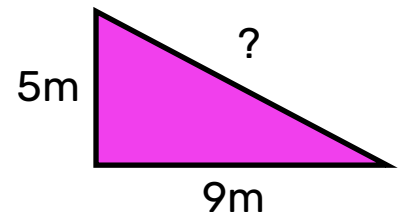# Robot Maths - Pythagoras' Theorem

We use **Pythagoras' Theorem** to work out a **missing length** of a **right-angled triangle**.
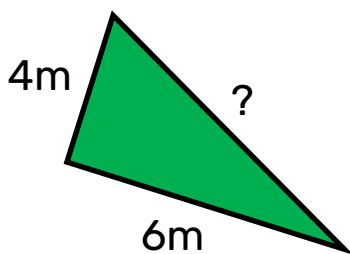
5m ? 9m

Are you trying to work out the longest side?

Yes

1) Square the two shorter sides
2) **Add** the results together
3) Find the square root
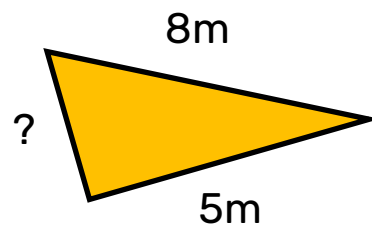4) Round your answer appropriately and use the correct unit

4m ? 6m

Example

1) 4^2 = 16 and 6^2 = 36
2)   16 + 36 = 52
3) $\sqrt{52}$ = 7.2111...
4)   7.2m

No

1) Square the two shorter sides
2) Take the bigger result and **subtract** the smaller result
3) Find the square root
4) Round your answer appropriately and use the correct unit

8m ? 5m

Example

1) 8^2 = 64 and 5^2 = 25
2)   64 - 25 = 39
3) $\sqrt{39}$ = 6.2449...
4)   6.2m