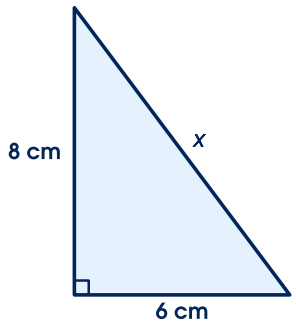
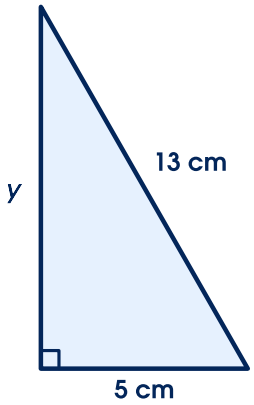
GCSE FOUNDATION · REVISION MAT 1

Pythagoras and trigonometry

1 Work out the length of the side marked x.
Give your answer to 1 decimal place if needed.

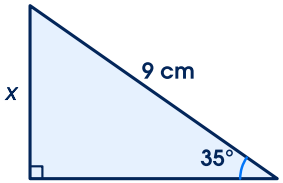


2 Work out the length of the side marked y.
Give your answer to 1 decimal place if needed.

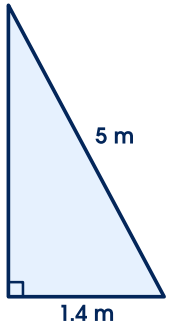


3 A triangle has sides 7 cm, 24 cm and 25 cm.
Show that it is a right-angled triangle.

4 Show that $x = 5.2$ cm,
correct to 1 decimal place.



5 A ladder 5 m long leans against a wall.
The foot of the ladder is 1.4 m from the wall.



(a) How high up the wall does the ladder reach?

(b) The ladder is safe if the angle with the ground is between 70° and 80°. Is it safe?

6 A is the point (1, 2) and B is the point (7, 10).
Work out the length of the line AB.

Mr&Mrs MATHS

1 $x^2 = 6^2 + 8^2 = 100$

$x =$ **10 cm**

2 $y^2 = 13^2 - 5^2 = 144$

$y =$ **12 cm**

3 $7^2 + 24^2 = 49 + 576 = 625$

$25^2 = 625$

They are equal, so by Pythagoras it is **right-angled** ✓

ANSWERS · REVISION MAT 1

Pythagoras and trigonometry

4 $x = 9 \times \sin 35°$

$= 5.162... =$ **5.2 cm** ✓

5 (a) $\sqrt{(5^2 - 1.4^2)} =$ **4.80 m**

(b) angle $= \cos^{-1}(1.4 \div 5) = 73.7°$

Yes, safe

6 Across 6, up 8

AB $= \sqrt{(6^2 + 8^2)} =$ **10** units

Mr&Mrs MATHS