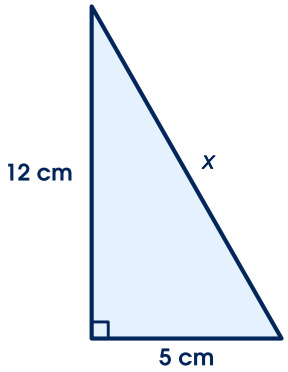
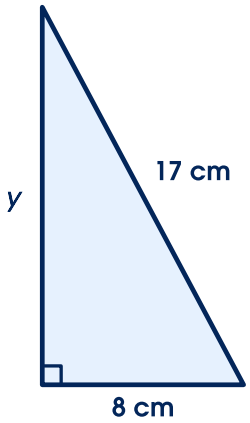
GCSE FOUNDATION · REVISION MAT 2

Pythagoras and trigonometry

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

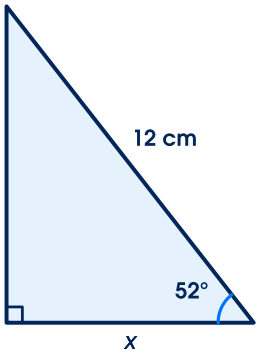


2 Work out the length of the side marked y.
Give your answer to 1 decimal place if needed.

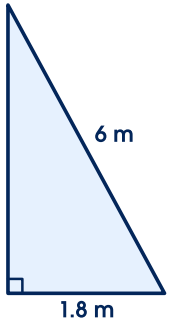


3 A triangle has sides 8 cm, 15 cm and 17 cm.
Show that it is a right-angled triangle.

4 Show that $x = 7.4$ cm,
correct to 1 decimal place.



5 A ladder 6 m long leans against a wall.
The foot of the ladder is 1.8 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 (–2, 1) and B is the point (3, 13).
Work out the length of the line AB.

Mr&Mrs MATHS

1 $x^2 = 5^2 + 12^2 = 169$

$x =$ **13 cm**

2 $y^2 = 17^2 - 8^2 = 225$

$y =$ **15 cm**

3 $8^2 + 15^2 = 64 + 225 = 289$

$17^2 = 289$

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

ANSWERS · REVISION MAT 2

Pythagoras and trigonometry

4 $x = 12 \times \cos 52°$

$= 7.388... =$ **7.4 cm** ✓

5 (a) $\sqrt{(6^2 - 1.8^2)} =$ **5.72 m**

(b) angle $= \cos^{-1}(1.8 \div 6) = 72.5°$

Yes, safe

6 Across 5, up 12

AB $= \sqrt{(5^2 + 12^2)} =$ **13** units

Mr&Mrs MATHS