

Pythagoras

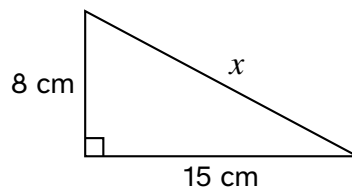
For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **27**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator. Diagrams are not drawn accurately.

1 Here is a right-angled triangle.



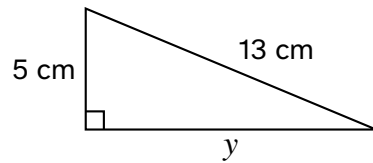
Not drawn accurately

Work out the length x .

[2 marks]

Answer _____ cm

- 2 Here is a right-angled triangle.



Not drawn accurately

Work out the length y .

[3 marks]

Answer _____ cm

- 3 A right-angled triangle has shorter sides 7 cm and 4 cm.

Work out the length of the hypotenuse.

Give your answer to 1 decimal place.

[2 marks]

Answer _____ cm

- 4 A rectangle is 8 cm long and 5 cm wide.

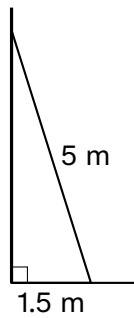
Work out the length of a diagonal.

Give your answer to 1 decimal place.

[2 marks]

Answer _____ cm

- 5** A ladder 5 m long leans against a vertical wall.
The foot of the ladder is on horizontal ground, 1.5 m from the wall.



Not drawn accurately

How far up the wall does the ladder reach?
Give your answer to 1 decimal place.

[3 marks]

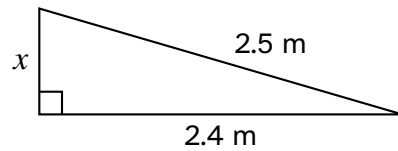
Answer _____ m

- 6** Work out the distance between the points $(-1, 2)$ and $(4, 9)$.
Give your answer to 1 decimal place.

[3 marks]

Answer _____

- 7 Here is a right-angled triangle.



Not drawn accurately

Use Pythagoras' theorem to show that $x = 0.7$

[2 marks]

- 8 A triangle has sides 9 cm, 12 cm and 15 cm.

Is the triangle right-angled? Tick a box.

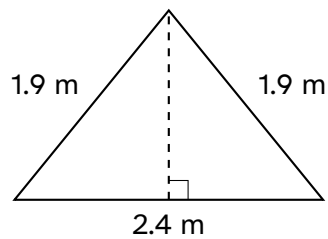
You must show your working.

[2 marks]

☐ Yes

☐ No

- 9 The front of a tent is an isosceles triangle.
The width of the tent is 2.4 m and each sloping side is 1.9 m.
Asha says,
‘The tent is more than 1.5 m tall in the middle.’

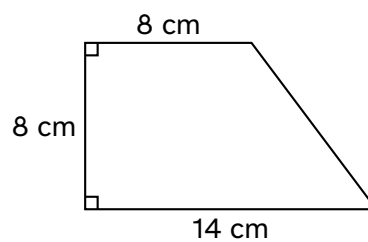


Not drawn accurately

Use Pythagoras' theorem to show that Asha is wrong.

[4 marks]

- 10 Here is a trapezium.



Not drawn accurately

Work out the perimeter of the trapezium.

[4 marks]

Answer _____ cm