

Pythagoras' Theorem

ANSWERS

Calculator | 30 minutes | Total marks: 23

Name Class

1

Work out

(a) 12^2

Answer 144 (1) [1 mark]

(b) $\sqrt{81}$

Answer 9 (1) [1 mark]

(c) 15^2

Answer 225 (1) [1 mark]

2

$$c^2 = a^2 + b^2$$

$$a = 6 \text{ and } b = 8$$

(a) Work out the value of c^2

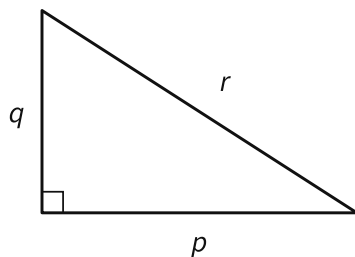
$c^2 =$ 100 (1) [1 mark]

(b) Work out the value of c .

$c =$ 10 (1) [1 mark]

3

Here is a right angled triangle.

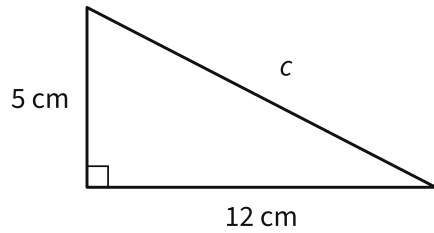


Not drawn accurately

Write down the letter of the longest side, the hypotenuse.

Answer r (1) [1 mark]

4

Complete the working to find the length of c .

Not drawn accurately

$$c^2 = 5^2 + 12^2$$

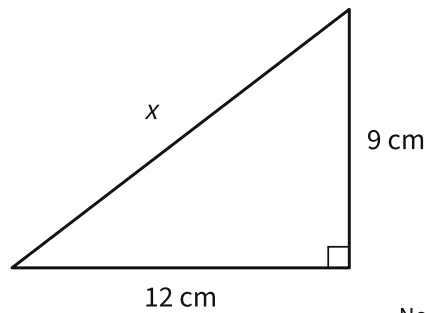
$$c^2 = \boxed{25} + \boxed{144} \quad (1)$$

$$c^2 = \boxed{169} \quad (1)$$

$$c = \boxed{13} \text{ cm} \quad (1)$$

[3 marks]

5

(a) Work out the length of x .

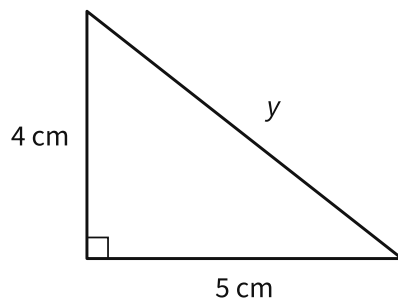
Not drawn accurately

$$9^2 + 12^2 = 225 \quad (1)$$

$$x = \underline{15} \text{ cm} \quad (1) \quad [2 \text{ marks}]$$

(b) Work out the length of y .

Give your answer to 1 decimal place.



Not drawn accurately

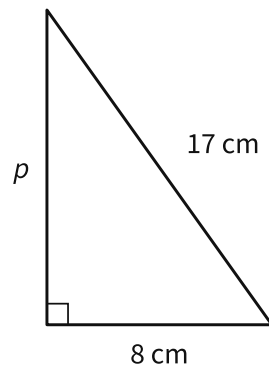
$$4^2 + 5^2 = 41 \quad (1)$$

$$\sqrt{41} \quad (1)$$

$$y = \underline{6.4} \text{ cm} \quad (1) \quad [3 \text{ marks}]$$

6

(a) Work out the length of p .



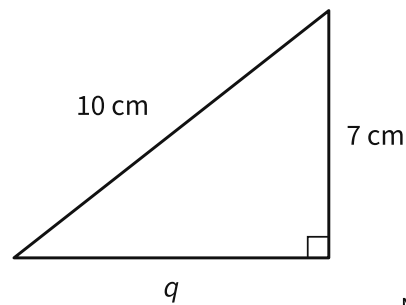
Not drawn accurately

$$17^2 - 8^2 = 225 \quad (1)$$
$$\sqrt{225} \quad (1)$$

$$p = \underline{15} \quad (1) \text{ cm} \quad [3 \text{ marks}]$$

(b) Work out the length of q .

Give your answer to 1 decimal place.



Not drawn accurately

$$10^2 - 7^2 = 51 \quad (1)$$
$$\sqrt{51} \quad (1)$$

$$q = \underline{7.1} \quad (1) \text{ cm} \quad [3 \text{ marks}]$$

7 A is the point (1, 1) and B is the point (4, 5)

Work out the length of the line AB.

3 across and 4 up (1)

$$3^2 + 4^2 = 25 \text{ (1)}$$

Answer 5 (1) units [3 marks]

Question	Topic	RAG
1	I know squares and square roots	
2	I can substitute into the formula	
3	I can identify the hypotenuse	
4	I can follow the steps to find a hypotenuse	
5	I can find the length of the hypotenuse	
6	I can find the length of a shorter side	
7	I can find the length of a line between two points	