

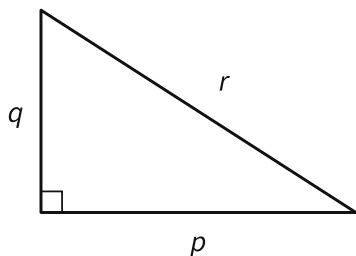
Pythagoras' Theorem

ANSWERS

Calculator | 30 minutes | Total marks: 21

Name Class

1 Here is a right angled triangle.



Not drawn accurately

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

Answer r (1) [1 mark]

2 Work out

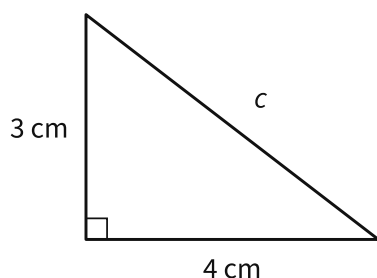
(a) 5^2

Answer 25 (1) [1 mark]

(b) $\sqrt{49}$

Answer 7 (1) [1 mark]

3 Complete the working to find the length of c .



Not drawn accurately

$$c^2 = 3^2 + 4^2$$

$$c^2 = \boxed{9} + \boxed{16}$$

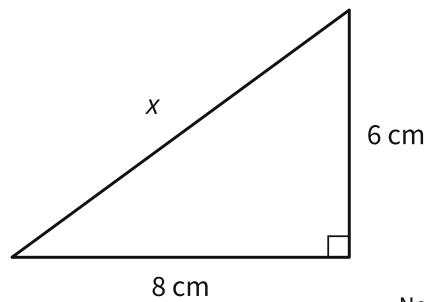
(1)

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

$$c = \boxed{5} \text{ cm} \quad (1)$$

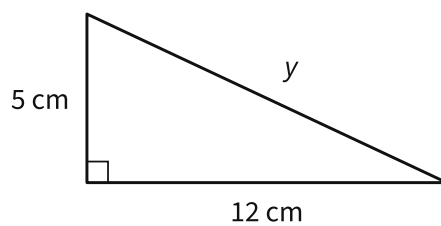
[3 marks]

4

(a) Work out the length of x .

$$6^2 + 8^2 = 100 \text{ (1)}$$

$$x = \underline{10 \text{ (1)}} \text{ cm [2 marks]}$$

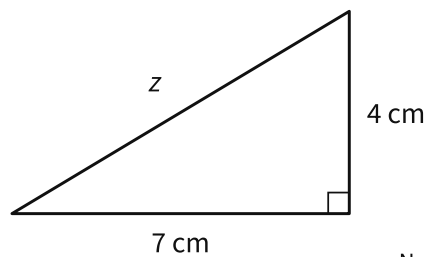
(b) Work out the length of y .

$$5^2 + 12^2 = 169 \text{ (1)}$$

$$y = \underline{13 \text{ (1)}} \text{ cm [2 marks]}$$

(c) Work out the length of z .

Give your answer to 1 decimal place.

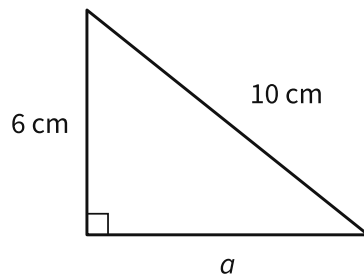


$$4^2 + 7^2 = 65 \text{ (1)}$$

$$\sqrt{65} \text{ (1)}$$

$$z = \underline{8.1 \text{ (1)}} \text{ cm [3 marks]}$$

5

(a) Complete the working to find the length of a .

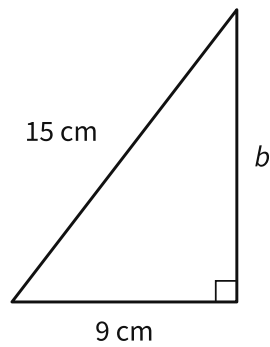
$$a^2 = 10^2 - 6^2$$

$$a^2 = \boxed{64} \quad (1)$$

$$a = \boxed{8} \text{ cm} \quad (1)$$

[2 marks]

Not drawn accurately

(b) Work out the length of b .

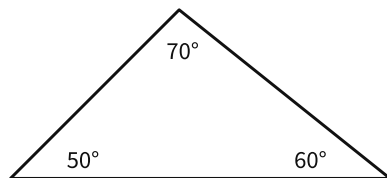
$$15^2 - 9^2 = 144 \quad (1)$$

$$\sqrt{144} \quad (1)$$

$$b = \underline{12} \quad (1) \text{ cm} \quad [3 \text{ marks}]$$

Not drawn accurately

6



Not drawn accurately

Can Pythagoras' theorem be used in this triangle?

Give a reason for your answer.

No, it has no right angle (1)

[1 mark]

7 A rectangle is 8 cm long and 6 cm wide.

Work out the length of its diagonal.

$$8^2 + 6^2 = 100 \text{ (1)}$$

Answer 10 (1) cm [2 marks]

Question	Topic	RAG
1	I can identify the hypotenuse	
2	I can work out squares and square roots	
3	I can follow the steps to find a hypotenuse	
4	I can find the length of the hypotenuse	
5	I can find the length of a shorter side	
6	I know when Pythagoras' theorem can be used	
7	I can use Pythagoras' theorem in a rectangle	