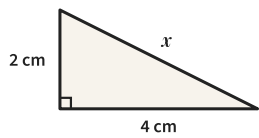


Surds and Pythagoras

1

Find x . Give your answer as a simplified surd.



$$x^2 = 16 + 4 = 20$$

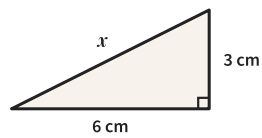
$$x = \sqrt{20} = \sqrt{4} \times \sqrt{5}$$

$$x = \boxed{}$$

Answer _____

2

Find x . Give your answer as a simplified surd.



$$x^2 = 36 + 9 = 45$$

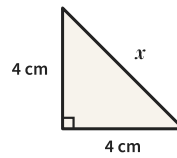
$$x = \sqrt{} = \sqrt{} \times \sqrt{}$$

$$x = \boxed{}$$

Answer _____

3

Find x . Give your answer as a simplified surd.



$$x^2 = \boxed{} + \boxed{} = \boxed{}$$

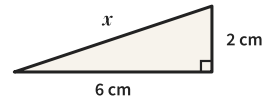
$$x = \sqrt{} = \sqrt{} \times \sqrt{}$$

$$x = \boxed{}$$

Answer _____

4

Find x . Give your answer as a simplified surd.

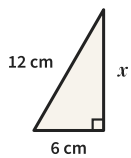


$$x = \boxed{}$$

Answer _____

5

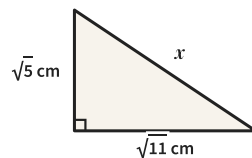
Find x . Give your answer as a simplified surd.



Answer _____

6

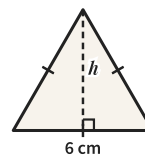
Find the length of the hypotenuse.



Answer _____

7

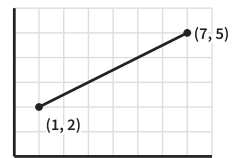
This is an equilateral triangle. Find its height h as a simplified surd.



Answer _____

8

Find the distance between the points (1, 2) and (7, 5). Give your answer as a simplified surd.

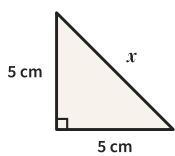


Answer _____

Surds and Pythagoras *further practice*

9

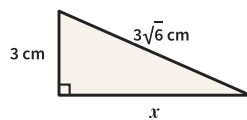
Find x . Give your answer as a simplified surd.



Answer _____

10

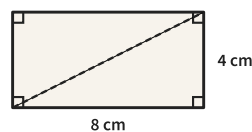
Find x . Give your answer as a simplified surd.



Answer _____

11

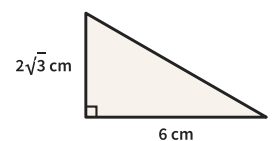
A rectangle is 8 cm long and 4 cm wide. Find the length of its diagonal as a simplified surd.



Answer _____

12

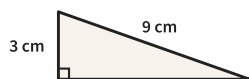
Find the perimeter of this triangle. Give your answer in the form $a + b\sqrt{3}$.



Answer _____

13

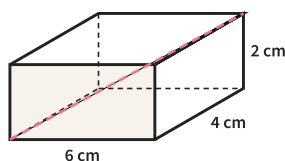
Find the exact area of this triangle as a simplified surd.



Answer _____

14

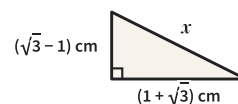
Find the length of the dashed diagonal of this cuboid as a simplified surd.



Answer _____

15

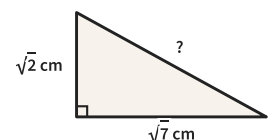
Find the length of the hypotenuse as a simplified surd.



Answer _____

16

Ali says the hypotenuse is 3 cm. Leon says it is $\sqrt{2} + \sqrt{7}$ cm. Who is right? Explain.



Answer _____