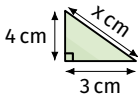


Start Tasks — Answers



Use Pythagoras' theorem to find the missing hypotenuse, labelled x .

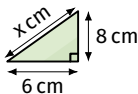
1.



Solution

$$\begin{aligned}x^2 &= 3^2 + 4^2 \\&= 9 + 16 = 25 \\x &= \sqrt{25} = 5 \text{ cm}\end{aligned}$$

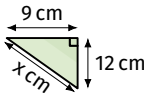
2.



Solution

$$\begin{aligned}x^2 &= 6^2 + 8^2 \\&= 36 + 64 = 100 \\x &= \sqrt{100} = 10 \text{ cm}\end{aligned}$$

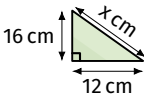
3.



Solution

$$\begin{aligned}x^2 &= 9^2 + 12^2 \\&= 81 + 144 = 225 \\x &= \sqrt{225} = 15 \text{ cm}\end{aligned}$$

4.



Solution

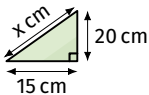
$$\begin{aligned}x^2 &= 12^2 + 16^2 \\&= 144 + 256 = 400 \\x &= \sqrt{400} = 20 \text{ cm}\end{aligned}$$

Start Tasks — Answers



Use Pythagoras' theorem to find the missing hypotenuse, labelled x .

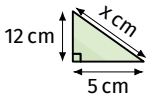
5.



Solution

$$\begin{aligned}x^2 &= 15^2 + 20^2 \\&= 225 + 400 = 625 \\x &= \sqrt{625} = 25 \text{ cm}\end{aligned}$$

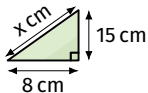
6.



Solution

$$\begin{aligned}x^2 &= 5^2 + 12^2 \\&= 25 + 144 = 169 \\x &= \sqrt{169} = 13 \text{ cm}\end{aligned}$$

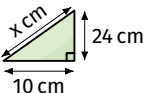
7.



Solution

$$\begin{aligned}x^2 &= 8^2 + 15^2 \\&= 64 + 225 = 289 \\x &= \sqrt{289} = 17 \text{ cm}\end{aligned}$$

8.



Solution

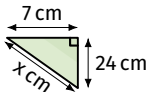
$$\begin{aligned}x^2 &= 10^2 + 24^2 \\&= 100 + 576 = 676 \\x &= \sqrt{676} = 26 \text{ cm}\end{aligned}$$

Start Tasks — Answers



Use Pythagoras' theorem to find the missing hypotenuse, labelled x .

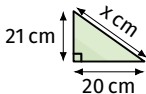
9.



Solution

$$\begin{aligned}x^2 &= 7^2 + 24^2 \\&= 49 + 576 = 625 \\x &= \sqrt{625} = 25 \text{ cm}\end{aligned}$$

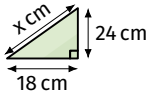
10.



Solution

$$\begin{aligned}x^2 &= 20^2 + 21^2 \\&= 400 + 441 = 841 \\x &= \sqrt{841} = 29 \text{ cm}\end{aligned}$$

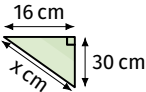
11.



Solution

$$\begin{aligned}x^2 &= 18^2 + 24^2 \\&= 324 + 576 = 900 \\x &= \sqrt{900} = 30 \text{ cm}\end{aligned}$$

12.



Solution

$$\begin{aligned}x^2 &= 16^2 + 30^2 \\&= 256 + 900 = 1156 \\x &= \sqrt{1156} = 34 \text{ cm}\end{aligned}$$

Start Tasks — Answers



Use the square-area version of Pythagoras' theorem: the two smaller square areas add to give the hypotenuse's square area.

13. The squares on the two shorter sides have areas 64 cm^2 and 225 cm^2 . Find the hypotenuse.

Solution

$$64 + 225 = 289, \text{ so hypotenuse} \\ = \sqrt{289} = 17 \text{ cm}$$

15. The squares on the two shorter sides have areas 144 cm^2 and 1225 cm^2 . Find the hypotenuse.

Solution

$$144 + 1225 = 1369, \text{ so hypotenuse} \\ = \sqrt{1369} = 37 \text{ cm}$$

14. The squares on the two shorter sides have areas 100 cm^2 and 576 cm^2 . Find the hypotenuse.

Solution

$$100 + 576 = 676, \text{ so hypotenuse} \\ = \sqrt{676} = 26 \text{ cm}$$

16. The squares on the two shorter sides have areas 81 cm^2 and 1600 cm^2 . Find the hypotenuse.

Solution

$$81 + 1600 = 1681, \text{ so hypotenuse} \\ = \sqrt{1681} = 41 \text{ cm}$$