

Perimeter of Right-angled Shapes



Find a missing edge using Pythagoras' theorem, then calculate the perimeter by adding all sides.

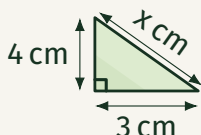
Name _____

Date _____

Find the missing side first

Use $a^2 + b^2 = c^2$ (or $c^2 - a^2 = b^2$) to find the missing edge. Then add all sides to find the perimeter.

Worked example Find the missing side, then the perimeter.



Step 1: Find x using $a^2 + b^2 = c^2$

$$3^2 + 4^2 = x^2$$

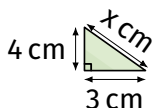
$$9 + 16 = x^2$$

$$x = 5 \text{ cm}$$

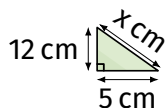
Step 2: Find the perimeter

$$\text{Perimeter} = 3 + 4 + 5 = 12 \text{ cm}$$

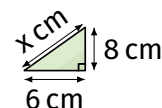
1. Find x , then perimeter.



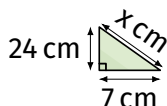
2. Find x , then perimeter.



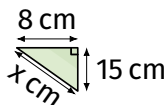
3. Find x , then perimeter.



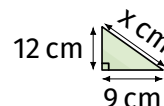
4. Find x , then perimeter.



5. Find x , then perimeter.



6. Find x , then perimeter.

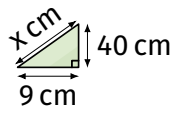


7. A rectangle has width 5 m and diagonal 13 m. Find the length, then the perimeter.

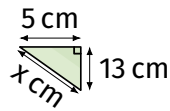
8. A right triangle has legs 6 cm and 8 cm. Find the hypotenuse, then the perimeter.

9. A rectangular garden has dimensions 7 m by 24 m. Find the diagonal, then the perimeter.

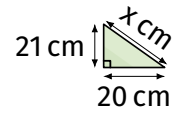
10. Find x , then perimeter.



11. Find x , then perimeter.



12. Find x , then perimeter.

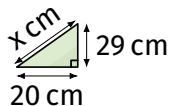


13. A right triangle has legs 8 m and 15 m. Find the hypotenuse, then the perimeter to 1 d.p.

14. A rectangular roof has width 10 m and hypotenuse 26 m. Find the length, then the perimeter.

15. A triangular sail has legs 12 cm and 35 cm. Find the hypotenuse, then the perimeter.

16. Find x , then perimeter.



17. A right triangle has hypotenuse 10 cm and one leg 6 cm. Find the other leg, then the perimeter to 1 d.p.

18. A rectangular plot has area 42 m^2 and one side 6 m. Find the diagonal, then the perimeter.
