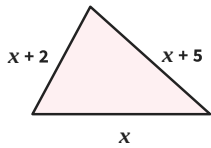


Forming and Solving Equations: Perimeter

ANSWERS

1

The perimeter of this triangle is 28 cm.
Form an equation and solve it to find x .



Add every side. The total is the perimeter.

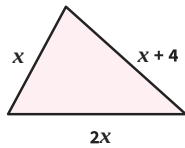
$$x + x + 2 + x + 5 = 28$$

$$3x + 7 = 28, \text{ so } 3x = 21$$

$$x = 7$$

2

The perimeter of this triangle is 24 cm.
Form an equation and solve it to find x .



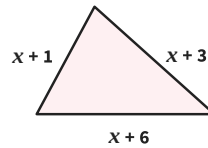
$$2x + x + 4 + x = 24$$

$$4x + 4 = 24, \text{ so } 4x = 20$$

$$x = 5$$

3

The perimeter of this triangle is 31 cm.
Form an equation and solve it to find x .



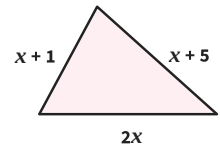
$$x + 6 + x + 3 + x + 1 = 31$$

$$3x + 10 = 31, \text{ so } 3x = 21$$

$$x = 7$$

4

The perimeter of this triangle is 30 cm.
Form an equation and solve it to find x .



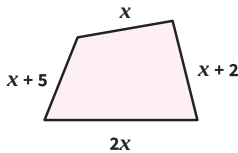
$$2x + x + 5 + x + 1 = 30$$

$$4x + 6 = 30, \text{ so } 4x = 24$$

$$x = 6$$

5

The perimeter of this quadrilateral is 32 cm.
Form an equation and solve it to find x .



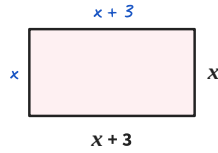
$$2x + x + 2 + x + x + 5 = 32$$

$$5x + 7 = 32, \text{ so } 5x = 25$$

$$x = 5$$

6

The perimeter of this rectangle is 22 cm.
Form an equation and solve it to find x .



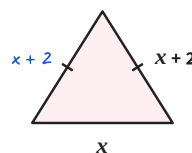
$$x + 3 + x + x + 3 + x = 22$$

$$4x + 6 = 22, \text{ so } 4x = 16$$

$$x = 4$$

7

The perimeter of this isosceles triangle is 25 cm.
Form an equation and solve it to find x .



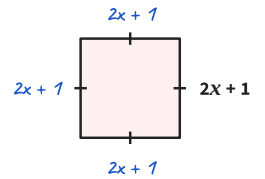
$$x + x + 2 + x + 2 = 25$$

$$3x + 4 = 25, \text{ so } 3x = 21$$

$$x = 7$$

8

The perimeter of this square is 36 cm.
Form an equation and solve it to find x .



$$2x + 1 + 2x + 1 + 2x + 1 + 2x + 1 = 36$$

$$8x + 4 = 36, \text{ so } 8x = 32$$

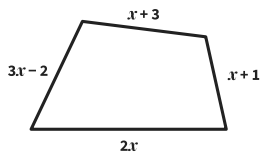
$$x = 4$$

Forming and Solving Equations: Perimeter further practice

ANSWERS

9

The perimeter of this quadrilateral is 37 cm. Form an equation and solve it to find x .



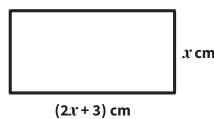
$$2x + 2 = 37$$

$$2x = 35$$

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

10

The perimeter of this rectangle is 36 cm. Find x .



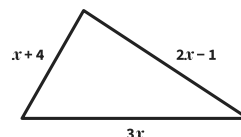
$$2x + 3 + x + 2x + 3 + x = 36$$

$$6x + 6 = 36$$

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

11

The perimeter of this triangle is 45 cm. Find the length of the longest side.



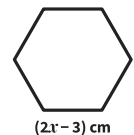
$$6x + 3 = 45, \text{ so } x = 7$$

$$3 \times 7$$

$$\text{Answer } 21 \text{ cm}$$

12

This regular hexagon has a perimeter of 42 cm. Find x .



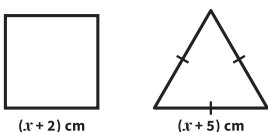
$$6(2x - 3) = 42$$

$$2x - 3 = 7$$

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

13

The square and the equilateral triangle have the same perimeter. Find x .



$$4(x + 2) = 3(x + 5)$$

$$4x + 8 = 3x + 15$$

$$\text{Answer } x = 7$$

14

A rectangular vegetable bed is 3 times as long as it is wide. Its perimeter is 96 m. Find its width and its length.

$$2w + 3w + 2w + 3w = 96$$

$$8w = 96$$

$$12 \text{ m}$$

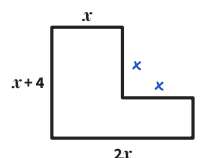
Width

$$36 \text{ m}$$

Length

15

The diagram shows the floor of an L shaped room. Lengths are in metres. The perimeter is 50 m. Find x .



$$\text{the two missing sides are both } x$$

$$6x + 8 = 50$$

$$\text{Answer } x = 7$$

16

Sam says a rectangle with sides of $(x + 5)$ cm and $(x - 3)$ cm could have a perimeter of 14 cm. Is Sam right? Explain.

$$4x + 4 = 14, \text{ so } x = 2.5$$

$$\text{then } x - 3 = -0.5: \text{ not a length}$$

$$\text{Answer } \text{No}$$