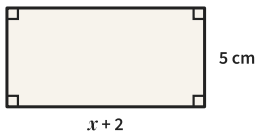


Area and linear equations

ANSWERS

1

The area of this rectangle is 40 cm^2 . Find x .

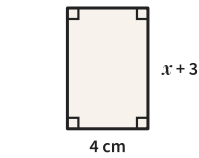


$$\begin{aligned} \text{Area } 5(x+2) &= 40 \\ \div 5 \quad x+2 &= 8 \\ x &= 6 \end{aligned}$$

Answer $x = 6$

2

The area of this rectangle is 44 cm^2 . Find x .

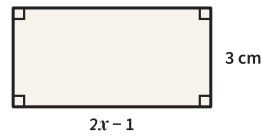


$$\begin{aligned} \text{Area } 4(x+3) &= 44 \\ \div 4 \quad x+3 &= 11 \\ x &= 8 \end{aligned}$$

Answer $x = 8$

3

The area of this rectangle is 27 cm^2 . Find x .

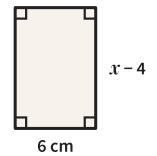


$$\begin{aligned} \text{Area } 3(2x-1) &= 27 \\ \div 3 \quad 2x-1 &= 9 \\ x &= 5 \end{aligned}$$

Answer $x = 5$

4

The area of this rectangle is 30 cm^2 . Find x .

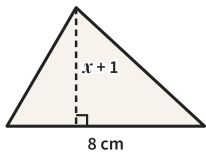


$$\begin{aligned} x &= 9 \end{aligned}$$

Answer $x = 9$

5

The area of this triangle is 28 cm^2 . Find x .

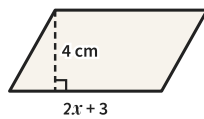


$$\frac{1}{2} \times 8 \times (x+1) = 28$$

Answer $x = 6$

6

The area of this parallelogram is 44 cm^2 . Find the length of its base.

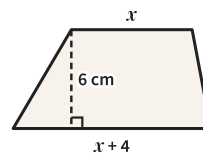


$$x = 4, \text{ so the base is } 2 \times 4 + 3$$

Answer 11 cm

7

The area of this trapezium is 54 cm^2 . Find x .

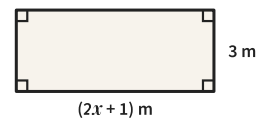


$$\frac{1}{2} \times (2x+4) \times 6 = 54$$

Answer $x = 7$

8

A rectangular patio is 3 m wide and $(2x+1) \text{ m}$ long. Its area is 33 m^2 . How long is the patio?



$$2x+1 = 11$$

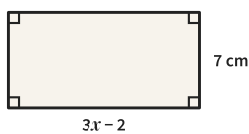
Answer 11 m

Area and linear equations further practice

ANSWERS

9

The area of this rectangle is 49 cm^2 . Find x .

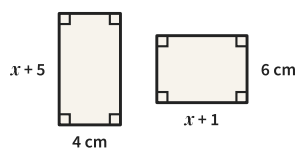


$$3x-2 = 7$$

Answer $x = 3$

10

These two rectangles have the same area. Find x .

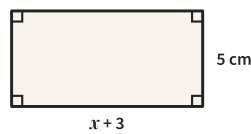


$$4x+20 = 6x+6$$

Answer $x = 7$

11

The perimeter of this rectangle is 30 cm. Find its area.

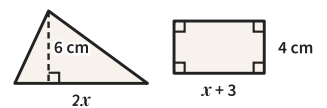


$$2x+16 = 30, \text{ so } x = 7$$

Answer 50 cm^2

12

The triangle and the rectangle have the same area. Find x .

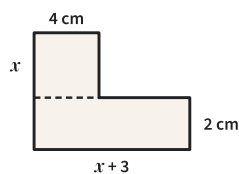


$$6x = 4x+12$$

Answer $x = 6$

13

This shape is made from two rectangles. Its area is 42 cm^2 . Find x .

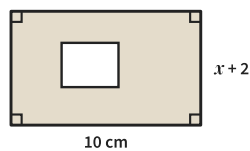


$$4x+2(x+3) = 42$$

Answer $x = 6$

14

A 3 cm by 4 cm rectangle is cut out of this rectangle. The shaded area left is 58 cm^2 . Find x .

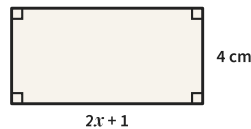


$$10(x+2) - 12 = 58$$

Answer $x = 5$

15

The area of this rectangle is 30 cm^2 . Find x . Give your answer as a decimal.

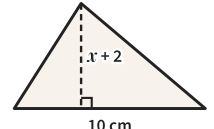


$$2x+1 = 7.5$$

Answer $x = 3.25$

16

The area of this triangle is 40 cm^2 . Priya says $x = 2$. Is she right? Explain.



$$\text{she forgot the } \frac{1}{2}: 5(x+2) = 40$$

Answer $\text{No, } x = 6$