Solving Quadratics by Factorising

1 one of the brackets must be 0

Solve $x^2 + 9x + 20 = 0$

×	x	
x	x^2	
		+20

= 0

$x =$ $x =$

2

Solve $x^2 + 11x + 18 = 0$

×		
	x^2	
		+18

= 0

$x =$ $x =$

3

Solve $x^2 + 4x - 12 = 0$

×		

= 0

$x =$ $x =$

4 *Notice the change!*

Solve $x^2 - 10x + 16 = 0$

×		

= 0

$x =$ $x =$

5 make it = 0 first

Solve $x^2 = 3x + 28$

×		

= 0

$x =$ $x =$

6 make it = 0 first

Solve $x^2 - 6x + 5 = 21$

×		

= 0

$x =$ $x =$

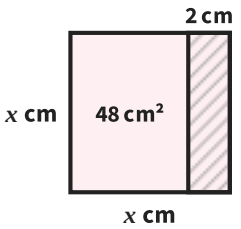
7

Priya solves $x^2 - 2x - 35 = 0$.
She writes $(x + 5)(x - 7) = 0$, so $x = -7$ or $x = 5$. Explain her mistake.
Then write the right answers.

Answer _____

8

A square tile has sides of x cm. A 2 cm strip is cut off one side. The piece that is left has an area of 48 cm². Find x.



Answer _____

Solving Quadratics by Factorising *further practice*

9

Solve $x^2 - 10x + 21 = 0$

Answer _____

10

Solve $x^2 + 4x = 32$

Answer _____

11

Solve $x^2 = 9x - 20$

Answer _____

12

Show that $x = 6$ is a solution of $x^2 + x - 42 = 0$. Then find the other solution.

Answer _____

13

Two positive numbers have a difference of 4. They multiply to make 96. Find the two numbers.

Answer _____

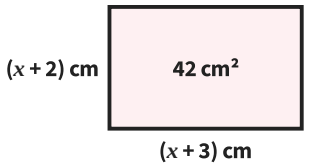
14

A quadratic equation has solutions $x = 3$ and $x = -8$. Write it in the form $x^2 + bx + c = 0$.

Answer _____

15

The rectangle has an area of 42 cm^2. Find x, then the length of each side.



Answer _____

16

Jo solves $x^2 + 2x = 15$.

She writes $x(x + 2) = 15$, so $x = 15$ or $x + 2 = 15$. Explain her mistake. Then solve it.

Answer _____