

**Check out**

You should now be able to ...

✓	Understand what an equation is.	5	1, 2
✓	Calculate the unknown value in equations.	5	3
✓	Use balancing to solve equations.	6	4, 5
✓	Solve equations with unknowns on both sides.	6	6
✓	Write equations from real-life situations.	6	7

**Test it**

Questions

5	1, 2
5	3
6	4, 5
6	6
6	7

**Language**

**Meaning**

**Example**

<b>Equation</b>	An equation is true for particular values. For any equation, the left-hand side is equal to the right-hand side.	$2x - 5 = 13$ True for $x = 9$
<b>Expression</b>	An expression is a group of terms but no equals sign.	$2a - 3b$
<b>Inequality</b>	An inequality is where one side is greater than the other.	$7 < 8$ is the same as $8 > 7$
<b>Solve</b>	To solve an equation means to find the value of the unknown.	Solve $2x - 5 = 13$ $2x - 5 + 5 = 13 + 5$ $2x = 18$ $2x \div 2 = 18 \div 2$ $x = 9$
<b>Unknown</b>	The letter in an equation represents the unknown value.	In the equation $2x - 5 = 13$ the unknown is represented by the letter $x$ .

1 Do these pairs of calculations make equations? Use = for an equation and  $\neq$  for not an equation.

a  $5 \times 7$  and  $70 \div 2$

b  $24 + 17$  and  $8 \times 5$

c  $14 \times 3$  and  $50 - 9$

2 Write  $>$  or  $<$  in-between the calculations to make inequalities.

a  $25 \div 5$     $4 \times 2$

b  $42 \div 3$     $3 \times 4$

c  $5 \times 11$     $7 \times 8$

3 Solve these equations.

a  $a + 16 = 29$

b  $b - 14 = 31$

c  $3 + c = 13$

d  $2 \times d = 30$

e  $e \div 5 = 9$

f  $3f = 27$

g  $\frac{g}{2} = 8$

4 Solve these equations by balancing.

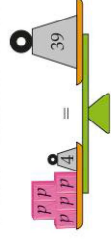
a  $3x + 6 = 27$

b  $5x - 7 = 48$

c  $6x + 4 = 10$

d  $32 = 3x - 4$

5 a Write an equation for these scales.



b Solve the equation to calculate the value of  $p$ .

6 Solve these equations.

a  $n + n + 7 = n + n + n + 5$

b  $m + m + m + m = m + 18$

c  $3q + 7 = 13$

d  $5x - 12 = 4x - 10$

e  $4x - 13 = x + 5$

f  $6x - 8 = 4x - 2$

7 The perimeter of this rectangle is 32 cm



a Write an equation for the perimeter of the rectangle.

b Solve the equation.

c Find the lengths of each side of the rectangle.

**What next?**

Score	0 - 3	4 - 6	7
	Your knowledge of this topic is still developing. To improve look at Formative test: 3A-10; MyMaths: 1154, 1158, 1182 and 1925	You are gaining a secure knowledge of this topic. To improve look at Invisipen: 231, 232, 233, 234, 235 and 237	You have mastered this topic. Well done, you are ready to progress!