

1 Solving two step equations

Solve

a) $5x - 8 = 27$

b) $\frac{x}{3} + 4 = 10$

a) $5x = 35, x = 7$

b) $\frac{x}{3} = 6, x = 18$

2 Equations with brackets

Solve

a) $4(x + 3) = 32$

b) $2(3x - 4) = 19$

a) $x + 3 = 8, x = 5$

b) $6x - 8 = 19, 6x = 27$

$x = 4.5$

3 Equations: the unknown on both sides

Solve

a) $6x - 5 = 2x + 19$

b) $4(x + 2) = x + 23$

a) $4x - 5 = 19, 4x = 24, x = 6$

b) $4x + 8 = x + 23$

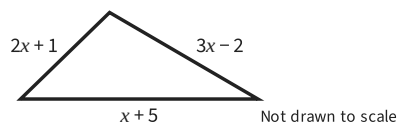
$3x = 15, x = 5$

4 Forming equations: perimeter

The perimeter of this triangle is 40 cm. Lengths are in cm.

a) Form an equation and solve it to find x .

b) Find the length of the longest side.



a) $6x + 4 = 40, x = 6$

b) $3 \times 6 - 2 = 16 \text{ cm}$

Equations and inequalities revision mat answers

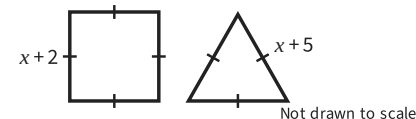
Foundation A

5 Forming equations: equal perimeters

The square and the equilateral triangle have the same perimeter. Lengths are in cm.

a) Find x .

b) Find the perimeter of the square.



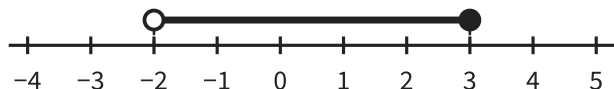
a) $4x + 8 = 3x + 15, x = 7$

b) $4 \times 9 = 36 \text{ cm}$

6 Inequalities on a number line

a) Write down the inequality shown.

b) x is an integer. Write down all the values of x shown.



a) $-2 < x \leq 3$

b) $-1, 0, 1, 2, 3$

7 Solving inequalities

Solve

a) $4x - 3 < 17$

b) $5x + 2 \geq 2x - 10$

a) $4x < 20, x < 5$

b) $3x + 2 \geq -10, 3x \geq -12$

$x \geq -4$

8 Solving inequalities: forming

Bike hire costs £4 plus £1.50 for each hour. Kai has £25 to spend. He hires a bike for h hours.

a) Write an inequality in h .

b) Find the greatest number of whole hours he can hire it for.

a) $4 + 1.5h \leq 25$

b) $1.5h \leq 21, h \leq 14$

14 hours