

1 Solving two step equations

Solve

a) $3x + 4 = 19$

b) $\frac{x}{4} + 2 = 5$

a) $3x = 15, x = 5$

b) $\frac{x}{4} = 3, x = 12$

2 Equations with brackets

Solve

a) $2(x + 3) = 14$

b) $5(x - 1) = 20$

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

b) $x - 1 = 4, x = 5$

3 Equations: the unknown on both sides

Solve

a) $4x + 1 = 2x + 9$

b) $6x - 2 = x + 13$

a) subtract $2x$: $2x + 1 = 9, x = 4$

b) subtract x : $5x - 2 = 13$

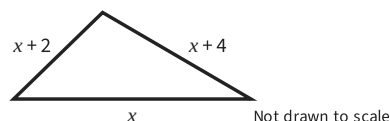
$5x = 15, x = 3$

4 Forming equations: perimeter

Here is a triangle. Lengths are in cm.

a) Write an expression for its perimeter. Simplify it.

b) The perimeter is 21 cm. Find x .



a) $x + x + 2 + x + 4 = 3x + 6$

b) $3x + 6 = 21, 3x = 15, x = 5$

Equations and inequalities revision mat answers

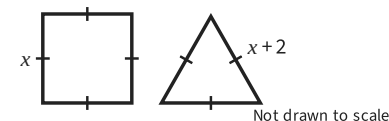
Foundation B

5 Forming equations: equal perimeters

Here are a square and an equilateral triangle. Lengths are in cm.

a) Write an expression for the perimeter of each shape.

b) The perimeters are equal. Find x .



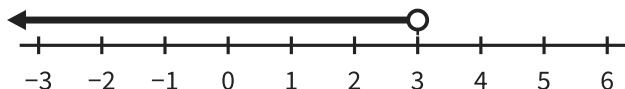
a) square $4x$, triangle $3x + 6$

b) $4x = 3x + 6, x = 6$

6 Inequalities on a number line

a) Write down the inequality shown.

b) x is an integer and $1 < x \leq 4$. List the values of x .



a) $x < 3$

b) 2, 3, 4

7 Solving inequalities

Solve

a) $x + 6 > 10$

b) $3x \leq 21$

a) subtract 6: $x > 4$

b) divide by 3: $x \leq 7$

8 Solving inequalities: forming

Cinema tickets cost £6 each. Leo has £40. He buys t tickets.

a) Fill in the box. $6t \leq \square$

b) What is the greatest number of tickets he can buy?

a) $6t \leq 40$

b) $6 \times 6 = 36, 6 \times 7 = 42$

6 tickets