

1 Expanding single brackets

Expand

a) $3(x + 4)$

b) $x(x + 5)$

a) $3x + 12$

b) $x^2 + 5x$

2 Equation or identity?

a) Write equation or identity for each. $x + 7 = 12$,

$4x - x = 3x$

b) Fill in the box to make an identity. $5(x + 2) \equiv 5x + \square$

a) equation, identity

b) $5 \times 2 = 10$

3 Expanding double brackets

a) Complete the grid to expand and simplify $(x + 3)(x + 6)$

b) Expand and simplify $(x + 5)(x - 2)$

$\times$	x	$+3$
x	x^2	
$+6$		

a) $x^2 + 3x + 6x + 18 = x^2 + 9x + 18$

b) $x^2 - 2x + 5x - 10 = x^2 + 3x - 10$

4 Factorising quadratics

a) Find two numbers that multiply to make 10 and add to make 7.

b) Factorise $x^2 + 7x + 10$

a) 2 and 5

b) $(x + 2)(x + 5)$

Quadratics, rearranging formulae and identities revision mat answers

Foundation B

5 The difference of two squares

a) Fill in the box. $x^2 - 25 = (x + 5)(x - \square)$

b) Factorise $x^2 - 100$

a) $5 \times 5 = 25: 5$

b) $(x + 10)(x - 10)$

6 Rearranging formulae

a) Make x the subject of $y = x - 6$

b) Make x the subject of $y = 4x + 3$

a) add 6: $x = y + 6$

b) subtract 3: $y - 3 = 4x$

$x = \frac{y - 3}{4}$

7 Solving quadratics by factorising

Solve

a) $(x - 4)(x + 2) = 0$

b) $x^2 + 7x + 12 = 0$

a) $x - 4 = 0$ or $x + 2 = 0$: $x = 4$ or -2

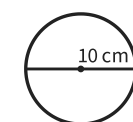
b) $(x + 3)(x + 4) = 0$

$x = -3$ or -4

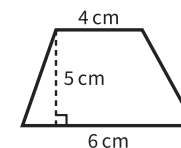
8 Using the formulae sheet

a) Find the area of the trapezium.

b) Find the circumference of the circle to 1 decimal place.



Not drawn to scale



a) $\frac{1}{2} \times (4 + 6) \times 5 = 25 \text{ cm}^2$

b) $\pi \times 10 = 31.4 \text{ cm}$