

Algebraic Expressions

ANSWERS

Calculator | 30 minutes | Total marks: 28

Name Class

1 Simplify

(a) $4b + 3b$

Answer 7b (1) [1 mark]

(b) $6c - 2c$

Answer 4c (1) [1 mark]

(c) $5x + 2y + 3x$

8x (1)

Answer 8x + 2y (1) [2 marks]

2 Write each of these without a multiplication sign.

(a) $3 \times n$

Answer 3n (1) [1 mark]

(b) $a \times b$

Answer ab (1) [1 mark]

(c) $y \times y$

Answer y² (1) [1 mark]

3 Write one word from the box next to each of these.

expression

equation

formula

$3x + 4$ expression

$A = lw$ formula

$2x = 10$ equation

All three correct scores 2 marks. One correct scores 1 mark. [2 marks]

4

Sam has n sweets.

- (a) Tia has 5 more sweets than Sam.

Write an expression for the number of sweets Tia has.

Answer $n + 5$ (1)

[1 mark]

- (b) Ben has twice as many sweets as Sam.

Write an expression for the number of sweets Ben has.

Answer $2n$ (1)

[1 mark]

5

$$x = 4 \quad y = 3$$

- (a) Work out the value of $5x$

Answer 20 (1)

[1 mark]

- (b) Work out the value of $2x + 3y$

$$8 + 9 \text{ (1)}$$

Answer 17 (1)

[2 marks]

- (c) Work out the value of x^2

Answer 16 (1)

[1 mark]

6

Complete the grid to expand $4(x + 3)$

$\times$	x	$+ 3$
4	$4x$	$+ 12$ (1)

$$4(x + 3) = 4x + 12 \text{ (1)}$$

[2 marks]

7

Expand

(a) $2(x + 5)$

Answer $2x + 10$ (1) [1 mark]

(b) $3(y - 4)$

Answer $3y - 12$ (1) [1 mark]

(c) $5(2a + 1)$

Answer $10a + 5$ (1) [1 mark]

8

Expand and simplify $2(x + 3) + 3(x + 1)$

$2x + 6$ (1)

$+ 3x + 3$ (1)

Answer $5x + 9$ (1) [3 marks]

9

Factorise

(a) $3x + 12 = 3(\boxed{x} + \boxed{4})$ (1)

[1 mark]

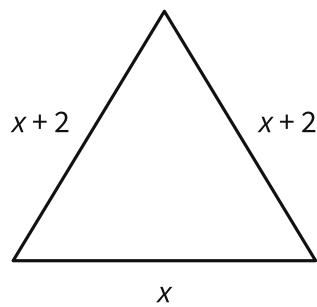
(b) $2x + 6$

Answer $2(x + 3)$ (1) [1 mark]

(c) $5y - 20$

Answer $5(y - 4)$ (1) [1 mark]

10 Here is a triangle.



Not drawn accurately

Write an expression for the perimeter of the triangle.

Give your answer in its simplest form.

$$x + 2 + x + 2 + x \text{ (1)}$$

Answer $3x + 4$ (1)

[2 marks]

Question	Topic	RAG
1	I can collect like terms	
2	I can write expressions using algebra notation	
3	I know the difference between an expression, an equation and a formula	
4	I can write an expression from words	
5	I can substitute numbers into expressions	
6	I can expand a bracket using a grid	
7	I can expand a single bracket	
8	I can expand and simplify two brackets	
9	I can factorise an expression	
10	I can write and simplify an expression for a perimeter	