

Algebra: Simplifying Expressions

1) Simplify

- a) $x + x$
- b) $x \times x$
- c) $3x + 6x$
- d) $3x \times 3x$
- e) $5x^2y^3 + 3x^2y^3$
- f) $x^2y \times 4xy^3$

2) Simplify

- a) $x + y + y$
- b) $7x + 2y + x + 3y$
- c) $7y + 4x - 4y - 5x$
- d) $3p - 4q + p + 7q$

3) Expand and simplify

- a) $4(x + y) + 3(x + y)$
- b) $5(2x + y) + 3(5x + y)$
- c) $9(x + y) + 2(2x - y)$
- d) $2(2c + d) - 4(c + d)$
- e) $1(6p + q) - 4(4p - q)$
- f) $3(4x - 7y) + 2(x + 8y)$
- g) $3(x - 2y) - 3(9x - 6y)$

4) Expand and simplify

- a) $6(p + 2) - 5(8p - 2)$
- b) $6(6x + 7) - (3x - 8)$

5) a) Simplify $pq + 7pq$

b) Simplify $3x + 8y - x - 9y$

6) a) Simplify $8a + 7b - 6b + a$

b) Simplify $x^4 + x^4$

7) a) Simplify $y + y + x + y + x$

b) Simplify $t^3 + t^4 + t^5$

8) a) Simplify $a^4 \times a^2$

b) Simplify $9x^3y \times 5xy^5$

9) a) Simplify $4e + 2e - 3d + 4e$

b) Simplify $6x^2 - 2x^2$

c) Simplify $2t + 4d - 5t - 8d$

d) Simplify $5g \times 3d$

10) The table shows some expressions.

$3(p + p)$	$2p \times p$	$3p + 2p$	$2 + 2p$	$4p + 2p$

Two of the expressions **always** have the same value as $6p$.
Tick the boxes underneath the **two** expressions.