Simple equivalent expressions

6 questions | 9 marks

Equivalent correct methods earn the corresponding marks.

1. Simplify $2x + 5x$. [1 mark]

Add the coefficients: $2 + 5 = 7$.

Answer: $7x$

2. Simplify $8a - 3a$. [1 mark]

Eight copies minus three leave five copies.

Answer: $5a$

3. Write $p + p + p + p$ more briefly. [1 mark]

There are four identical terms.

Answer: $4p$

4. Simplify $3b + 2 + b + 5$. [2 marks]

$3b + b = 4b$.

$2 + 5 = 7$.

Answer: $4b + 7$

5. Write $2(n + 4)$ without brackets. [2 marks]

There are two copies of n and two copies of 4.

Answer: $2n + 8$

6. Is $4x + 2$ equivalent to $6x$? Use $x = 3$ to explain. [2 marks]

$4 \times 3 + 2 = 14$.

$6 \times 3 = 18$.

A counterexample disproves equivalence.

Answer: No: the values are 14 and 18.