1 Simplify each expression.

(a) $3y + 2y + 7$ (1)

(b) $15 + y - y$ (1)

(c) $7a - 2a - 3$ (1)

(d) $12 + 3x - x$ (1)

(4 marks)

2 Simplify each expression.

(a) $3y + 7 - y$ (1)

(b) $6a + 5 + a - 4$ (1)

(c) $15 + 7q - 10 - q$ (1)

(d) $5x + 2 - x + 3$ (1)

(4 marks)

3 Simplify each expression. Take care with the signs.

(a) $3c + 8 - 5c + 7 + 8c$ (1)

(b) $4d - 5 + 8 - 2d$ (1)

(c) $4g + 6 - 8g - 9$ (1)

(d) $3h - 7 - 9h + 11$ (1)

(4 marks)

4 Here are nine terms.

$5x \quad 3y \quad 2 \quad 9x \quad 12 \quad y \quad 4m \quad x \quad 7m$

(a) Sort all nine terms into four groups of like terms (2)

(b) Simplify each group (2)

(c) Write a simplified expression for the sum of all nine terms (1)

(5 marks)

5 Write a simplified expression for the perimeter of each shape.

(a) A rectangle with sides l and w (1)

(b) A rectangle with sides b and 3 (1)

(c) An equilateral triangle with side $s + 2$ (1)

(d) A rectangle with sides $2x + 3$ and $y - 2$ (1)

(4 marks)

6 Peter simplified two expressions. For $x - x$ he wrote $0x$, and for $3p - 3p$ he wrote $0p$.

(a) What should each of the two answers be? (1)

(b) Explain what $0x$ means, and why it can be written more simply (2)

(3 marks)