1 Expand and simplify.

(a) $4(2x + 3) + 3(x - 2)$ (1)

(b) $6(a + 2) + 2(3a - 5)$ (1)

(c) $5(2m - 1) + 4(m + 3)$ (1)

(d) $3(3y + 2) + 2(y - 4)$ (1)

(4 marks)

2 Factorise each expression fully.

(a) $18x + 24$ (1)

(b) $25a - 40$ (1)

(c) $16m + 24n$ (1)

(d) $30 - 45p$ (1)

(4 marks)

3 Here are six expressions.

A $4(x + 3)$ B $2x + 12 + 2x$ C $4x + 7$

D $2(2x + 6)$ E $5x + 12 - x$ F $4x + 3$

(a) Write each expression in its expanded and collected form (2)

(b) Sort the six letters into groups of expressions that are equal to each other (2)

(c) Explain why the expressions cannot be sorted just by looking at them (2)

(8 marks)

4 A rectangle has length $(3x + 2)$ and width 4.

(a) Write an expression for its area, expanded (1)

(b) Write an expression for its perimeter, simplified (1)

(c) Factorise your answer to (b) fully (1)

(4 marks)

5 The sides of a triangle are 12, $5x$ and $4x$ units long.

(a) Write a simplified expression for the perimeter of the triangle (1)

(b) Factorise your answer fully (1)

(c) Find the perimeter when $x = 4$ (1)

(d) Check your answer to (c) using your factorised form (2)

(5 marks)

6 Expand and simplify.

(a) $2(3x + 4y) + 3(x - 2y)$ (1)

(b) $5(a + 2b) + 2(3a - 4b)$ (1)

(c) $4(2m + n) + 3(m - 2n)$ (1)

(3 marks)