1 A rectangle has length $(2x + 5)$ cm and width 3 cm.

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

(b) Find the perimeter when $x = 6$ (1)

(c) The perimeter is 34 cm. Find x (2)

(5 marks)

2 Solve each equation.

(a) $4(x - 3) = 24$ (1)

(b) $3(2n + 1) = 27$ (1)

(c) $5(m + 2) - 3 = 22$ (1)

(3 marks)

3 A shop sells exercise books at $2{,}500$ shillings each and charges $4{,}000$ for delivery.

(a) Write an expression for the cost of n books (1)

(b) Find the cost of 12 books (1)

(c) A school spent $54{,}000$ shillings. How many books? (1)

(d) A second school has $40{,}000$ shillings. Write an inequality for how many books they can buy, and find the largest whole number. (2)

(7 marks)

4 Musa is y years old. His father is three times his age and his sister is 4 years younger than Musa. Their ages add to 61.

(a) Write expressions for his father's and sister's ages (1)

(b) Write an equation for the total and simplify it (2)

(c) Solve it and give all three ages (2)

(5 marks)

5 Here is $8x + 12$.

(a) Factorise it fully (1)

(b) Find its value when $x = 5$ (1)

(c) Solve $8x + 12 = 60$ (1)

(d) Write down which of (a), (b) and (c) treated it as an expression, which as a formula and which as an equation (2)

(5 marks)

6 **Extension.** A rectangle has width w and a length that is 5 cm more than its width. Its perimeter is 38 cm.

(a) Write an expression for the length (1)

(b) Write an equation for the perimeter and solve it (2)

(c) Write down the area of the rectangle (1)

(5 marks)