Questions 3, 4 and 5 do not tell you what to do. Decide what the question wants, then do it.

1 Here is $2x + 6$. Answer all three questions about it.

(a) Factorise $2x + 6$ (1)

(b) If $A = 2x + 6$, find A when $x = 5$ (1)

(c) Solve $2x + 6 = 20$ (1)

(d) The same six symbols appeared in all three parts. Write down what changed between them (2)

(6 marks)

2 Here is $3n - 4$. Answer all three questions about it.

(a) Find its value when $n = 7$ (1)

(b) Solve $3n - 4 = 26$ (1)

(c) Write a situation that the expression $3n - 4$ could describe (2)

(5 marks)

3 $5x + 10$

(a) $5x + 10$ where you are told $x = 4$ (1)

(b) $5x + 10$ fully factorised (1)

(c) $5x + 10 = 45$ (1)

(4 marks)

4 $C = 25000h + 40000$

(a) $h = 6$ (1)

(b) $C = 140{,}000$ (1)

(c) What the $40{,}000$ is for (2)

(5 marks)

5 y and 7

(a) $y + 7$ when $y = 11$ (1)

(b) $y + 7 = 11$ (1)

(c) $y > 7$, drawn (2)

(d) Write down which of (a), (b) and (c) had exactly one answer, and which had more than you could count (2)

(7 marks)

6 Three pupils were each given the same instruction: *simplify* $4(x+3)$. Aisha wrote $4x + 12$. Bwire wrote $x = -3$. Cheptoo wrote $4x + 3$.

(a) Who is right? (1)

(b) Cheptoo made a mistake with the expanding. Write down what she forgot (2)

(c) Bwire did not make a mistake with the arithmetic – he did the wrong kind of thing altogether. Write down what he did. (2)

(5 marks)