## Calculators permitted but all working needs to be shown.

### Essential knowledge:

1. Remove the brackets from:
   a. $-6(x-4)$
   b. $s(3s+7)$

2. Remove the brackets and simplify:
   (a) $2(x+1)+3(x+7)$
   (b) $x(x-3)-3(x-6)$
   (c) $(y-8)(y+8)$
   (d) $(z-2)^2$

3. Solve, algebraically the following equations:
   (a) $3x + 6 = 2 - x$
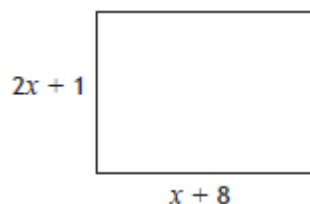   (b) $6(2 - x) = 7(1 - x)$

### Unit level:

4. Expand and simplify where appropriate:
   (a) $(x + 3)(x + 5)$
   (b) $(2x + 1)(x - 4)$
   (c) $2y(3y - 7)$

### Assessment level:

5. Expand and simplify $(3x + 1)(x - 1) + 2(x^2 - 5)$

6. Multiply out the brackets and collect like terms $(3x + 1)(x^2 - 5x + 4)$

7. Find an expression for the **area** of the rectangle shown **without brackets**.

$2x + 1$

$x + 8$

8. Solve the equation $\dfrac{x}{2} - 1 = \dfrac{3-x}{5}$

9. Solve the equation $\dfrac{2x}{3} - \dfrac{5}{6} = 2x$