GCSE FOUNDATION · REVISION MAT 5

Expanding brackets

1 Expand

(a) $5(2x + 1)$

(b) $x(x + 3)$

2 Expand and simplify

$2(x + 5) + 4(x - 3)$

3 Kai says,

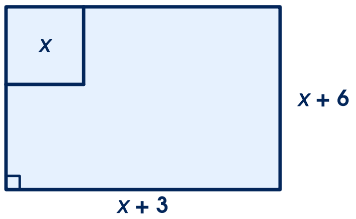
"$-6(x - 3) = -6x - 18$"

Explain the mistake Kai has made.

4 Show that

$(x + 4)(x + 2) \equiv x^2 + 6x + 8$

5 A square of side x cm is cut from a rectangle.



Show that the area left is $9x + 18$ cm^2

6 A square has side $(x + 6)$ cm.

A rectangle measures $(x + 9)$ cm by $(x + 3)$ cm.

Show that the area of the square is always 9 cm^2 more than the area of the rectangle.

ANSWERS · REVISION MAT 5

Expanding brackets

1 (a) **$10x + 5$**

(b) **$x^2 + 3x$**

2 $2x + 10 + 4x - 12$

$= \mathbf{6x - 2}$

3 A negative times a negative is positive: $-6 \times -3 = 18$

$-6x + 18$

4 $x^2 + 2x + 4x + 8$

$= x^2 + 6x + 8$ ✓

5 $(x + 3)(x + 6) - x^2$

$= x^2 + 9x + 18 - x^2$

$= \mathbf{9x + 18}$ ✓

6 Square: $x^2 + 12x + 36$

Rectangle: $x^2 + 12x + 27$

Difference = **9** cm^2 ✓

Mr&Mrs MATHS