GCSE FOUNDATION · REVISION MAT 3

Factorising

1 Factorise

(a) $10x - 14$

(b) $x^2 + 9x$

2 Factorise fully $6y^2 + 9y$

3 Dom factorises $20x + 30$ and writes $5(4x + 6)$

Explain why this is not fully factorised.

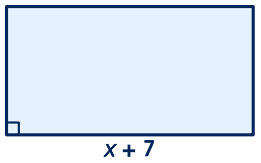
4 n is a whole number.

Show that $3n + 12$ is always a multiple of 3.

5 Factorise $x^2 + 8x + 15$

6 A rectangle has area $x^2 + 9x + 14$ cm^2.

Its length is $(x + 7)$ cm.



(a) Find an expression for the width.

(b) Find an expression for the perimeter.

ANSWERS · REVISION MAT 3

Factorising

1 (a) **$2(5x - 7)$**

(b) **$x(x + 9)$**

2 HCF = $3y$

$3y(2y + 3)$

3 $4x + 6$ still has a common factor.

The HCF of 20 and 30 is 10: **$10(2x + 3)$**

4 $3n + 12 = 3(n + 4)$

This is 3 × a whole number, so it is **a multiple of 3** ✓

5 Find two numbers that multiply to 15 and add to 8: 3 and 5

$(x + 3)(x + 5)$

6 (a) $x^2 + 9x + 14 = (x + 7)(x + 2)$, width **$x + 2$**

(b) $2(x + 7) + 2(x + 2) =$ **$4x + 18$**