

More Quadratic Factorising

Ex 1

$$2x^2 - 3x - 5$$

$$2x-5 \\ = -10$$

$$\begin{array}{l} +1 \quad -10 \\ -1 \quad +10 \\ +2 \quad -5 \checkmark \end{array}$$

$$2x^2 + 2x - 5x - 5$$

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

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

Ex 2

$$4x^2 - x - 5$$

$$4x-5 \\ = -20$$

$$\begin{array}{l} +4 \quad -5 \checkmark \\ -4 \quad +5 \end{array}$$

$$4x^2 + 4x - 5x - 5$$

$$4x(x+1) - 5(x+1)$$

$$(x+1)(4x-5)$$

Exercise

1)

$$\begin{array}{l} 2 \times 10 \\ = 20 \\ +4 \quad +5 \end{array}$$

$$2x^2 + 9x + 10$$

$$2x^2 + 4x + 5x + 10$$

$$2x(x+2) + 5(x+2)$$

$$(x+2)(2x+5)$$

2)

$$\begin{array}{l} 5 \times 6 = 30 \\ +10 \quad +3 \end{array}$$

$$5x^2 + 13x + 6$$

$$5x^2 + 10x + 3x + 6$$

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

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

$$\begin{array}{l} 3) \\ 3x-3 \\ = -9 \\ +9 -1 \end{array}$$

$$3x^2 + 8x - 3$$

$$3x^2 + 9x - x - 3$$

$$3x(x+3) - 1(x+3)$$

$$(x+3)(3x-1)$$

$$\begin{array}{l} 4) \\ 2x-4 = -8 \\ -8 +1 \end{array}$$

$$2x^2 - 7x - 4$$

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

$$2x(x-4) + 1(x-4)$$

$$(x-4)(2x+1)$$

5)

$$\begin{array}{l} 10x-3 = -30 \\ +6 -5 \end{array}$$

$$10x^2 + x - 3$$

$$10x^2 + 6x - 5x - 3$$

$$2x(5x+3) - 1(5x+3)$$

$$(5x+3)(2x-1)$$
