



# Factorising quadratic expressions

# Factorise these quadratic expressions

*Hint - attention to detail is critical*

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

$$2x^2 - 9x - 5$$

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

$$2x^2 + 9x - 5$$

$$2x^2 + 11x + 5$$

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

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

$$2x^2 - 11x + 5$$

$$2x^2 - 7x + 5$$

$$2x^2 + 7x + 5$$

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

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

## Activity cards

*Cut out the cards and investigate the relationship between the factors*

|                 |                 |                  |
|-----------------|-----------------|------------------|
| $x^2 + 6x + 5$  | $x^2 + 4x - 5$  | $2x^2 - 9x - 5$  |
| $2x^2 + 9x - 5$ | $2x^2 - 3x - 5$ | $2x^2 + 11x + 5$ |
| $2x^2 + 3x - 5$ | $2x^2 - 7x + 5$ | $2x^2 - 11x + 5$ |
| $2x^2 + 7x + 5$ | $x^2 - 4x - 5$  | $x^2 - 6x + 5$   |

## Hint cards

*Use these cards to help factorise the quadratic expressions*

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

# Solution

|            | $(x + 5)$        | $(x - 5)$        | $(2x + 5)$      | $(2x - 5)$      |
|------------|------------------|------------------|-----------------|-----------------|
| $(x + 1)$  | $x^2 + 6x + 5$   | $x^2 - 4x - 5$   | $2x^2 + 7x + 5$ | $2x^2 - 3x - 5$ |
| $(x - 1)$  | $x^2 + 4x - 5$   | $x^2 - 6x + 5$   | $2x^2 + 3x - 5$ | $2x^2 - 7x + 5$ |
| $(2x + 1)$ | $2x^2 + 11x + 5$ | $2x^2 - 9x - 5$  |                 |                 |
| $(2x - 1)$ | $2x^2 + 9x - 5$  | $2x^2 - 11x + 5$ |                 |                 |

Attention to  
detail is essential  
for success