

Mix Match Quadratics – Instructions

Print out one set of cards. Distribute one card to each pupil. Pupils then get out of their seats and walk around the room to find their partner.

Optionally, ask pairs to match up into groups of four, then ask fours to join to eights where possible to create quadratic families. The pair with a difference of two squares will be left on their own, which is an interesting point for discussion (either at the time or in the following lesson).

This could be done as an exit activity – when pupils have found their partners or groups, they are then allowed to leave the classroom.

There are 36 cards in total. If fewer cards are needed for a class, leave out an entire family of similar quadratics if numbers allow.

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

$$x^2 + x - 12$$

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

$$x^2 - x - 12$$

$$(x - 3)(x - 4)$$

$$x^2 - 7x + 12$$

$$(x + 3)(x + 4)$$

$$x^2 + 7x + 12$$

$$(x + 7)(x - 3)$$

$$x^2 + 4x - 21$$

$$(x - 7)(x - 3)$$

$$x^2 - 10x + 21$$

$(x + 7)(x + 3)$	$x^2 + 10x + 21$
$(x - 7)(x + 3)$	$x^2 - 4x - 21$
$(x + 5)(x - 5)$	$x^2 - 25$
$(x + 2)(x - 3)$	$x^2 - x - 6$
$(x + 3)(x - 2)$	$x^2 + x - 6$
$(x + 2)(x + 3)$	$x^2 + 5x + 6$

$(x - 2)(x - 3)$	$x^2 - 5x + 6$
$(x - 4)(x + 8)$	$x^2 + 4x - 32$
$(x + 4)(x - 8)$	$x^2 - 4x - 32$
$(x - 4)(x - 8)$	$x^2 - 12x + 32$
$(x + 4)(x + 8)$	$x^2 + 12x + 32$
$(x + 4)(x - 4)$	$x^2 - 16$