

Mathematics

Factorising Quadratics 1

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Try this

Expand the following brackets.

$$(x + 12)(x + 1)$$

$$(x + 6)(x + 2)$$

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

What's the same and what's different?



Independent task

1. Zaki spilled some smoothie over his work so he can no longer read the coefficient of x .

Write out all of the possible factorisations and questions.

$$x^2 + \text{[blurred]}x + 30$$

2. Factorise:

a) $x^2 + 8x + 15$

b) $x^2 + 11x + 28$

c) $x^2 + 16x + 28$

d) $x^2 + 16x + 15$

e) $x^2 + 29x + 100$

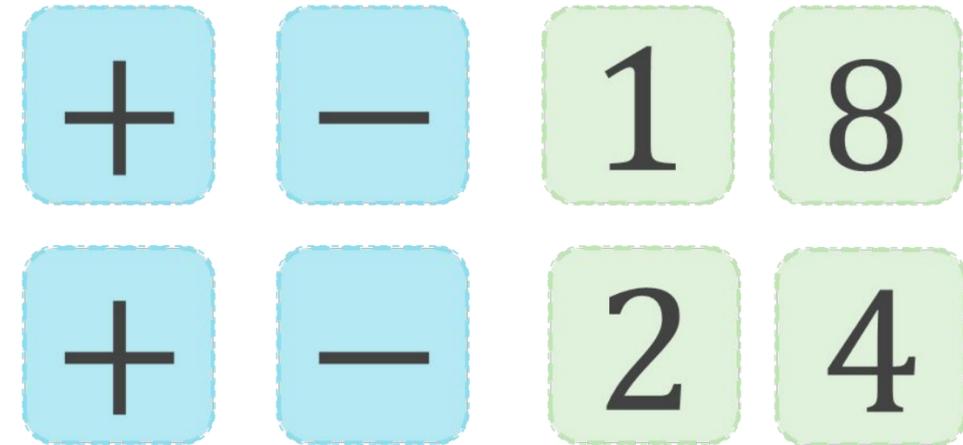
f) $x^2 - 100$



Explore

What different expansions can be made by picking two blue cards and two green cards?

$$(x \square \square)(x \square \square)$$



Can you arrange the cards so that the brackets expand to give the following quadratics?

1) $x^2 + 6x + 8$

2) $x^2 - 6x + 8$

3) $x^2 + 7x - 8$

4) $x^2 - 7x - 8$

5) $x^2 + 2x - 8$

6) $x^2 - 2x - 8$

7) $x^2 + 9x + 8$

8) $x^2 - 9x + 8$

What do you notice?

