

Solve a quadratic equation by factorising

Maths

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Solve a quadratic equation by factorising

1. Solve each equation.

a) $(y + 5)(y + 3) = 0$

b) $(w + 5)(w - 3) = 0$

c) $(m - 7)(m - 1) = 0$

2. Factorise and solve each equation.

a) $x^2 + 5x + 6 = 0$

b) $x^2 + 7x + 6 = 0$

c) $x^2 + 7x - 18 = 0$

d) $x^2 + 6x + 9 = 0$

e) $x^2 - 9 = 0$

3. Sort each equation into the correct category.

No integer solutions

One solution

Two solutions

$x^2 - 36$

$x^2 + 4x + 4$

$x^2 + 7x + 10$

$x^2 + 25$

$x^2 + 4x + 5$



Answers



Solve a quadratic equation by factorising

1. Solve each equation.

a) $(y + 5)(y + 3) = 0$ $y = -5$ and $y = -3$

b) $(w + 5)(w - 3) = 0$ $w = -5$ and $w = 3$

c) $(m - 7)(m - 1) = 0$ $m = 7$ and $m = 1$

2. Factorise and solve each equation.

a) $x^2 + 5x + 6 = 0$ $x = -2$ and $x = -3$

b) $x^2 + 7x + 6 = 0$ $x = -1$ and $x = -6$

c) $x^2 + 7x - 18 = 0$ $x = -9$ and $x = 2$

d) $x^2 + 6x + 9 = 0$ $x = -3$

e) $x^2 - 9 = 0$ $x = -3$ and $x = 3$

3. Sort each equation into the correct category.

No integer solutions	One solution	Two solutions
$x^2 + 4x + 5$	$x^2 + 4x + 4$	$x^2 - 36$
$x^2 + 25$		$x^2 + 7x + 10$

$x^2 - 36$

$x^2 + 4x + 4$

$x^2 + 7x + 10$

$x^2 + 25$

$x^2 + 4x + 5$

