

A quadratic equation is an equation in the form

$$0 = ax^2 + bx + c$$

Quadratic equations can be solved by...



1. Factoring
2. Taking Square Root
3. Completing the Square
4. Quadratic Formula

Zero Product Rule

For every number a and b , if $a \cdot b = 0$, then $a = 0$ or $b = 0$.

Example

$$\begin{array}{l} a \cdot b = 0 \\ (x - 4)(x - 5) = 0 \end{array}$$

$$\begin{array}{l} a \cdot b = 0 \\ (2x - 3)(3x + 5) = 0 \end{array}$$

Solve the following quadratic equations by factoring.

$$0 = x^2 + 8x + 12$$

$$0 = x^2 - 2x - 15$$

Solve the following quadratic equations by factoring.

$$0 = 2x^2 + 17x + 15$$

$$0 = 3x^2 - 14x + 8$$

Solve the following quadratic equations by factoring.

$$0 = x^2 - 25$$

$$0 = 4x^2 - 81$$

Solve the following quadratic equations by factoring.

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

$$25 = 9x^2$$

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$$0 = (\quad)(\quad)$$

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