

Lesson 2

Solving Quadratics

Graphing

Square Root

Quadratic Formula

Completing the Square

Factoring

$$\frac{2x}{2} = \frac{10}{2}$$

What you will learn about: $x = 5$
Algebraic Methods to Solve Quadratic Equations

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

Square Root means

No 'b' term

Solve by $\sqrt{\quad}$

Answer must have \pm

1. Solve each quadratic by taking the square root.

x · x

a. $\sqrt{x^2} = \sqrt{25}$

$$x = -5, 5$$

$$x = \pm 5$$

b. $\sqrt{x^2} = \sqrt{12}$

$$x = \pm \sqrt{12}$$

c. $\frac{5x^2}{5} = \frac{75}{5}$

$$\sqrt{x^2} = \sqrt{15}$$

$$x = \pm \sqrt{15}$$

d. $5x^2 + 8 = 8$
-8 -8

$$\frac{5x^2}{5} = \frac{0}{5}$$

$$\sqrt{x^2} = \sqrt{0}$$

$$x = 0$$

e. $5x^2 + 15 = 60$
-15 -15

$$\frac{5x^2}{5} = \frac{45}{5}$$

$$\sqrt{x^2} = \sqrt{9}$$

$$x = \pm 3$$

f. $5x^2 + 75 = 60$

$$-75 = -75$$

$$5x^2 = -15$$

$$x^2 = -3$$

$$\cancel{x = \pm \sqrt{-3}}$$

No Solution

g. $-5x^2 + 75 = 60$
-75 -75

$$\frac{-5x^2}{-5} = \frac{-15}{-5}$$

$$x^2 = 3$$

$$x = \pm \sqrt{3}$$