

MATH 1314

Chapter 2.4: Quadratic Equations

Quadratic Equation:

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

Solve by factoring.

$$x^2 - 7x + 10 = 0$$

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

$$2x^2 + 7x = 4$$

$$x^2 - 6x + 5 = 0$$

Solve by square root.

$$3x^2 - 15 = 0$$

$$9x^2 + 25 = 0$$

$$(x - 2)^2 = 6$$

$$(x + 5)^2 = 18$$

Completing The Square

$$(x + 5)^2 =$$

$$x^2 + Nx + \underline{\hspace{2cm}} = (x + \underline{\hspace{2cm}})^2$$

Quadratic Formula!

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

Solve.

$$x^2 + 5x - 1 = 0$$

$$9x^2 - 6x - 4 = 0$$

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Solve.

$$8x^2 + 2x - 1 = 0$$

$$2x^2 - 6x + 1 = 0$$

Find the zeros.

$$3x^2 - 2x + 4$$

$$9x^2 - 6x - 4$$

Discriminant

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

$$x =$$

State how many real solutions exist for the following equations.

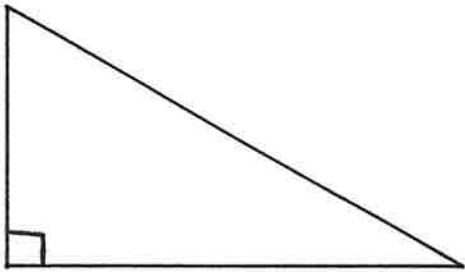
$$3x^2 + 4x - 5 = 0$$

$$9x^2 - 6x + 1 = 0$$

$$3x^2 + x + 5 = 0$$

$$x^2 + 4x + 4 = 0$$

Pythagorean Theorem



If the length of a rectangle is 12 inches and the height of the rectangle is 9 inches, find the diagonal of the rectangle.