A1 S2 w9d1 9-6 Solve by Quadratic Formula



Alg1 Week 9 Mon Copy the Quadratic Formula Warm Up

The Quadratic Formula (Skill 18)

If
$$ax^2 + bx + c = 0$$
, then $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

In the spaces provided below, copy the quadratic formula five times:

Alg1 Week 9 Mon

The Quadratic Formula

ow that we know the formula, let's use it to solve some quadratic equations! All we need is the values of a, b, and c to substitute into the formula. When written in standard form, the coefficient of the quadratic term is called a, the coefficient of the linear term is called b, and the constant term is called c.

The Quadratic Formula (Part of Skill 17)

If
$$ax^2 + bx + c = 0$$
, then $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

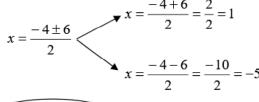
Example 1: Solve $x^2 + 4x - 5 = 0$ a = 1, b = 4, and c = -5

Substitute into the formula

$$x = \frac{-(4) \pm \sqrt{(4)^2 - 4(1)(-5)}}{2(1)}$$

$$x = \frac{-4 \pm \sqrt{16 + 20}}{2}$$

$$x = \frac{-4 \pm \sqrt{36}}{2}$$



$$x=1$$
 or $x=-5$

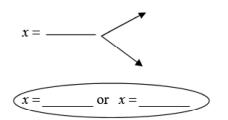
Example 2: Solve $x^2 - 2x - 3 = 0$ a =____, b =____, and c =____

Substitute into the formula

$$x = \frac{-(\underline{\hspace{1cm}}) \pm \sqrt{(\underline{\hspace{1cm}})^2 - 4(\underline{\hspace{1cm}})(\underline{\hspace{1cm}})}}{2(\underline{\hspace{1cm}})}$$

x =

x =



Use the quadratic formula to solve each quadratic equation. Check your answers on page 9.6 C.

 $1. x^2 - 7x + 10 = 0$

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

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

$$4. \qquad x^2 + 8x + 15 = 0$$

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

$$6. 4x^2 - 6 = 5x$$

7. Solve using comp sq
$$10x = -x^2 - 25$$

8.
$$3x^2 = x - 4$$

9. Solve using comp sq
$$x^2 = 10x$$

10.
$$x^2 + 1.5x - 4.5 = 0$$

Scrambled answers for 1-10: \emptyset , $\{-5\}$, $\{-5,-3\}$, $\{-4,1\}$, $\{-3,3\}$, $\{-3,1.5\}$, $\{-\frac{3}{4},2\}$, $\{2,\frac{1}{3}\}$, $\{1,\frac{3}{2}\}$, $\{2,5\}$