Algebra 2   Bellwork   Monday, November 30, 2015

Quadratic Formula: $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Find all real solutions to each quadratic equation. Give exact solutions. Use Factoring, Square Roots, and the Quadratic Formula. Each method must be used at least one time.
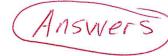
1. $x^2 - 2x = 80$

2. $5x^2 - 31 = 9$

3. $2x^2 + 11 = 10x$

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

5. $3x^2 - 2x + 7 = 0$

FACTORING

1. $x^2 - 2x = 80$

$x^2 - 2x - 80 = 0$

$(x - 10)(x + 8) = 0$

$x = -8, 10$

SQ ROOTS

2. $5x^2 - 31 = 9$

$ +31 \quad +31$

$\dfrac{5x^2}{5} = \dfrac{40}{5}$

$\sqrt{x^2} = \sqrt{8}$

$x = \pm 2\sqrt{2}$

QUAD FORMULA

3. $2x^2 + 11 = 10x$

$2x^2 - 10x + 11 = 0$

$b^2 - 4ac = 12$

$x = \dfrac{10 \pm \sqrt{12}}{4} = \dfrac{10 \pm 2}{4}$

$x = \dfrac{5 \pm \sqrt{3}}{2}$

FACTORING

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

$x = -\dfrac{3}{2}, \dfrac{1}{2}$

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

$(2x - 1)(2x + 3) = 0$

	$2x$	-1
$2x$	$4x^2$	$-2x$
$+3$	$+6x$	-3

-12
6
-2
4

QUAD FORMULA

5. $3x^2 - 2x + 7 = 0$

$b^2 - 4ac = -80$

No Real Solutions

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