Algebra 1 Bellwork Thursday, May 7, 2015

Solve each quadratic equation using one of the following methods: Square Roots, Factoring, Quadratic Formula. You must use each method at least once. Round answers to the nearest hundredth when needed.

1. $4x^2 - 34x = 0$

2. $-3x^2 + 31 = 11x$

3. $3x^2 - 9x = 12$

4. $4 + 3x^2 + 7 = x^2 + 33$

5. $2x^2 - 17x - 195 = 0$

6. $19 + 9x^2 = 68$

Algebra 1 Bellwork Thursday, May 7, 2015 Answers

Solve each quadratic equation using one of the following methods: Square Roots, Factoring, Quadratic Formula. You must use each method at least once. Round answers to the nearest hundredth when needed.

1. $4x^2 - 34x = 0$ FACTOR

$2x(2x-17)=0$

$x = 0, 17/2$

2. $-3x^2 + 31 = 11x$ Quad Form

$-3x^2 - 11x + 31 = 0$

$b^2 - 4ac = 493$

$x = \frac{11 \pm \sqrt{493}}{-6} = 1.87, -5.53$

3. $3x^2 - 9x = 12$ FACTOR

$3x^2 - 9x - 12 = 0$

$3(x^2 - 3x - 4) = 0$

$3(x-4)(x+1) = 0$

$x = -1, 4$

4. $4 + 3x^2 + 7 = x^2 + 33$ SQ ROOTS

$-x^2 \quad -x^2$

$2x^2 + 11 = 33$

$-11 \quad -11$

$\frac{2x^2}{2} = \frac{22}{2}$

$x^2 = 11$

$x = \pm\sqrt{11} = \pm 3.3$

5. $2x^2 - 17x - 195 = 0$ Quad Form

$b^2 - 4ac = 1849$

$x = \frac{17 \pm \sqrt{1849}}{4} = -6.5, 15$

6. $19 + 9x^2 = 68$ SQ ROOTS or FACTOR

$9x^2 = 49$

$x^2 = \frac{49}{9}$

$x = \pm\frac{7}{3}$ or ± 2.33