Algebra 2 Bellwork Monday, November 10, 2014

Solve each problem using the Quadratic Formula: $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

1. Give answers rounded to the nearest hundredth. $4x^2 + 9x - 6 = 0$

2. Give the exact answers. $x^2 - 5x + 1 = 0$

3. Give the exact answers. $x^2 - 4x - 7 = 0$

4. Give the exact answers. $3x^2 - 10x = 1$

Algebra 2 Bellwork Monday, November 10, 2014 ANSWERS

Solve each problem using the Quadratic Formula: $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

1. Give answers rounded to the nearest hundredth. $4x^2 + 9x - 6 = 0$

$b^2 - 4ac = 177$ $\quad X = \dfrac{-9 \pm \sqrt{177}}{8} = \boxed{-2.79,\ 0.54}$

2. Give the exact answers. $x^2 - 5x + 1 = 0$

$b^2 - 4ac = 21$ $\quad X = \boxed{\dfrac{5 \pm \sqrt{21}}{2}}$

3. Give the exact answers. $x^2 - 4x - 7 = 0$

$b^2 - 4ac = 44$ $\quad X = \dfrac{4 \pm \sqrt{44}}{2} = \dfrac{4 \pm 2\sqrt{11}}{2} = \boxed{2 \pm \sqrt{11}}$

4. Give the exact answers. $3x^2 - 10x = 1 \rightarrow 3x^2 - 10x - 1 = 0$

$b^2 - 4ac = 112$ $\quad \dfrac{10 \pm \sqrt{112}}{6} = \dfrac{10 \pm 4\sqrt{7}}{6} = \boxed{\dfrac{5 \pm 2\sqrt{7}}{3}}$

$\sqrt{112} = \sqrt{16 \cdot 7}$