Bellwork Alg 2A Monday, March 13, 2017

Find all EXACT real solutions to each using the Quadratic Formula.

Quadratic Formula: $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ Simplify all solutions.

1. $x^2 - 4x = 50$

2. $x^2 + 15x + 6 = 0$

3. $16x^2 - 40x + 13 = 0$

4. $18x^2 + 9x - 77 = 0$

5. $12x^2 - 84x + 147 = 0$

6. $6x^2 - 9x + 11 = 0$

Bellwork Alg 2A Monday, March 13, 2017

Find all EXACT real solutions to each using the Quadratic Formula.

Quadratic Formula: $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ Simplify all solutions.

Answers

1. $x^2 - 4x = 50$

$x^2 - 4x - 50 = 0$

$b^2 - 4ac = 216$

$x = \frac{4 \pm \sqrt{216}}{2} = \frac{4 \pm 6\sqrt{6}}{2}$ (36.6)

$= 2 \pm 3\sqrt{6}$

2. $x^2 + 15x + 6 = 0$

$b^2 - 4ac = 201$

$x = \frac{-15 \pm \sqrt{201}}{2}$

3. $16x^2 - 40x + 13 = 0$

$b^2 - 4ac = 768$

$x = \frac{40 \pm \sqrt{768}}{32}$ → 256.3

$= \frac{40 \pm 16\sqrt{3}}{32} = \frac{5 \pm 2\sqrt{3}}{4}$

4. $18x^2 + 9x - 77 = 0$

$b^2 - 4ac = 5625$

$x = \frac{-9 \pm \sqrt{5625}}{36}$

$x = \frac{-9 \pm 75}{36} = \frac{66}{36}, \frac{-84}{36}$

$= \frac{11}{6}, -\frac{7}{3}$

5. $12x^2 - 84x + 147 = 0$

$b^2 - 4ac = 0$

$x = \frac{84}{24} =$

$x = 3.5$ or $\frac{7}{2}$

6. $6x^2 - 9x + 11 = 0$

$b^2 - 4ac = -183$

No Real Solution