Algebra 2 Bellwork Monday, November 23, 2015

Solve each quadratic equation by either factoring or using square roots. Give the exact answer when using square roots.

1. $6x^2 - 29x = 0$

2. $2x^2 + 3 = 27$

3. $8x^2 - 98 = 0$

4. $48x^2 + 40x = 32$

5. $3x^2 + 29 = 17$

Algebra 2 Bellwork Monday, November 23, 2015 Answers

Solve each quadratic equation by either factoring or using square roots. Give the exact answer when using square roots.

1. $6x^2 - 29x = 0$

$x(6x-29)=0$

$x = 0, \frac{29}{6}$

2. $2x^2 + 3 = 27$

$-3 \quad -3$

$\frac{2x^2}{2} = \frac{24}{2}$

$\sqrt{x^2} = \sqrt{12}$

$4 \cdot 3$

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

3. $8x^2 - 98 = 0$

$2(4x^2 - 49) = 0$

$2(2x \pm 7) = 0$

$x = \pm 7/2$

OR

$8x^2 - 98 = 0$

$+98 \quad +98$

$\frac{8x^2}{8} = \frac{98}{8}$

$\sqrt{x^2} = \frac{98}{8} = \sqrt{\frac{49}{4}}$

4. $48x^2 + 40x = 32$

$48x^2 + 40x - 32 = 0$

$8(6x^2 + 5x - 4) = 0$

$8(3x + 4)(2x - 1) = 0$

$x = -4/3, 1/2$

5. $3x^2 + 29 = 17$

$-29 \quad -29$

$\frac{3x^2}{3} = \frac{-12}{3}$

$x^2 = -4$

NO REAL SOLUTION