

## Algebra II Worksheet #4 Unit 6 selected solutions

Solve each of the following using the square root property. Show all of your work neatly organized. Express imaginary solutions in bi form. Express all square roots in simplest form (exact value).

6.  $3x^2 - 7 = 0$

$$3x^2 = 7$$

$$x^2 = \frac{7}{3}$$

$$x = \pm \sqrt{\frac{7}{3}}$$

$$x = \pm \frac{\sqrt{21}}{3}$$

10.  $5x^2 + 4 = 0$

$$5x^2 = -4$$

$$x^2 = \frac{-4}{5}$$

$$x = \pm \sqrt{\frac{-4}{5}}$$

$$x = \pm \frac{2\sqrt{5}}{5}i$$

Solve each of the following equations using the factoring method. Show all of your work neatly organized.

15.  $6x^2 - x - 1 = 0$

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

$$3x + 1 = 0 \text{ or } 2x - 1 = 0$$

$$x = -1/3 \text{ or } x = 1/2$$

22.  $3x(7x + 4) = x + 2$

$$21x^2 + 12x = x + 2$$

$$21x^2 + 11x - 2 = 0$$

$$(3x + 2)(7x - 1) = 0$$

$$3x + 2 = 0 \text{ or } 7x - 1 = 0$$

$$x = -2/3 \text{ or } x = 1/7$$