

## Homework #10

Find the discriminant of each quadratic equation then state the number and type of solutions.

1)  $-n^2 = -4n + 7$

2)  $6x^2 + 2x = 8$

Solve each equation with the quadratic formula.

3)  $3x^2 - 10x - 25 = 0$

4)  $5b^2 - 11b = 12$

5)  $5v^2 + 5v - 2 = 0$

6)  $-b^2 - 6 = 4b - 9b^2$

$$7) 5p^2 - 10p + 9 = 0$$

**Solve each equation by taking square roots.**

$$8) 10x^2 = 810$$

$$9) b^2 - 3 = 38$$

**Solve each equation by factoring.**

$$10) 4n^2 - 4n - 20 = 1 + 4n$$

**Solve each equation by taking square roots.**

$$11) 9k^2 - 3 = -11$$

## Answers to Homework #10

1)  $-12$ ; two imaginary solutions

2)  $196$ ; two real solutions

$$3) \left\{ 5, -\frac{5}{3} \right\}$$

$$4) \left\{ 3, -\frac{4}{5} \right\}$$

$$5) \left\{ \frac{-5 + \sqrt{65}}{10}, \frac{-5 - \sqrt{65}}{10} \right\}$$

$$6) \left\{ \frac{1 + \sqrt{13}}{4}, \frac{1 - \sqrt{13}}{4} \right\}$$

$$7) \left\{ \frac{5 + 2i\sqrt{5}}{5}, \frac{5 - 2i\sqrt{5}}{5} \right\}$$

$$8) \{9, -9\}$$

$$9) \{\sqrt{41}, -\sqrt{41}\}$$

$$10) \left\{ \frac{7}{2}, -\frac{3}{2} \right\}$$

$$11) \left\{ \frac{2i\sqrt{2}}{3}, -\frac{2i\sqrt{2}}{3} \right\}$$