

## Section 1.1 - Modeling & Equation Solving

### Factoring Review

**Always look for a Greatest Common Factor FIRST!!!**

**2 TERMS**

(Must be in one of the following forms  
to factor with two terms)

**3 TERMS**

(X or Pattern)

**4 TERMS**

(Grouping)

Ex 1).  $4x^2 + 4x$

$$4x(x + 1)$$

Ex 2).  $x^2 - \frac{9}{64}$

$$\left(x - \frac{3}{8}\right) \left(x + \frac{3}{8}\right)$$

$$\sqrt[2]{4} = \pm 2$$

$$\sqrt[3]{8} = 2$$

Ex 3).  $3d^2 + 14d + 8$

$$d^2 + 14d + 8(3)$$

$$d^2 + 14d + 24$$

$$\left(d + \frac{12}{3}\right) \left(d + \frac{2}{3}\right)$$

$$(d+4)(3d+2)$$

Solve each equation by any method. Check your answer!

1.  $(x + 11)^2 = 121$

2.  $x^2 - 7x - \frac{3}{4} = 0$

3.  $x(x + 7) = 14$

4.  $x^2 - 3x + 4 = 2x^2 - 7x - 8$

Different ways to solve equations:



