

Review Quadratic Formula and Graphing

Solve by using the quadratic formula.  $X = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

1)  $x^2 + 4x - 10 = 0$

$$X = \frac{-(-4) \pm \sqrt{(-4)^2 - 4(1)(-10)}}{2(1)}$$

$$X = \frac{-4 \pm \sqrt{56}}{2}$$

$$X = \frac{-4 + \sqrt{56}}{2} \quad \& \quad \frac{-4 - \sqrt{56}}{2}$$

$$\text{1.74} \quad \& \quad -5.74$$

2)  $x^2 - 5x + 3 = 0$

$$X = \frac{-(-5) \pm \sqrt{(-5)^2 - 4(1)(3)}}{2(1)}$$

$$X = \frac{5 \pm \sqrt{13}}{2}$$

$$X = \frac{5 + \sqrt{13}}{2} \quad \& \quad \frac{5 - \sqrt{13}}{2}$$

$$\text{4.30} \quad \& \quad .70$$

3)  $x^2 + 3x + 6 = 0$

$$X = \frac{-(-3) \pm \sqrt{(-3)^2 - 4(1)(6)}}{2(1)}$$

$\sqrt{-15}$

**No Real Solutions**

4)  $x^2 - 9x + 4 = 0$

$$X = \frac{-(-9) \pm \sqrt{(-9)^2 - 4(1)(4)}}{2(1)}$$

$$X = \frac{9 \pm \sqrt{65}}{2}$$

$$X = \frac{9 + \sqrt{65}}{2} \quad \& \quad \frac{9 - \sqrt{65}}{2}$$

$$\text{8.53} \quad \& \quad .47$$

Graph each equation.

5)  $y = x^2 + 6x + 4$

$$y = 3(x+6) + 4$$

x	y
0	4
-6	4
-3	-5

$y = 3(-3+6) + 4$   
 $y = -5$

axis of symmetry  
 $x = -3$

6)  $y = x^2 - 4x + 6$

$$y = x(x-4) + 6$$

x	y
0	6
4	6
2	2

$y = 2(2-4) + 6$   
 $y = 2$