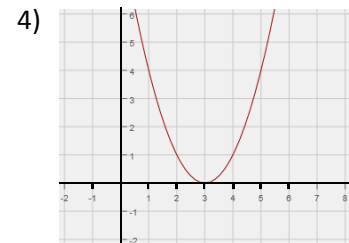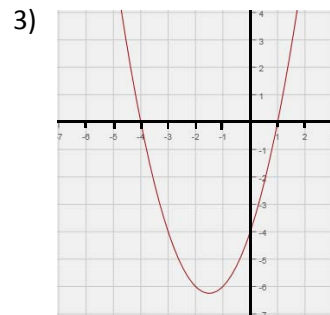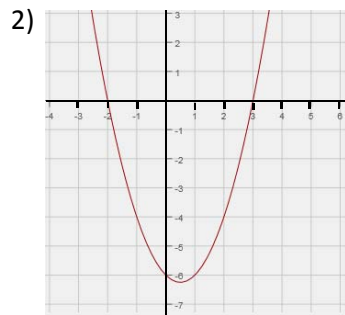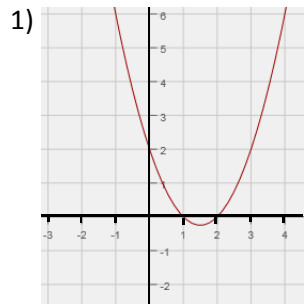Name_____   Date_____

Solving Quadratic Equations

Use the given graph to determine the solutions of each quadratic equation.
(Write solutions as x = _____)

1)

2)

3)

4)

Use "FOIL" and the results from problems 1 through 4 to find each quadratic equation.

5)   Results from problem 1   6)   Results from problem 2

7)   Results from problem 3   8)   Results from problem 4
                                                         (Hint: What do you do when there is only one solution?)

Use Factoring to find the solutions to each quadratic equation

9) $x^2 + 7x + 12 = 0$ 10) $x^2 - 7x + 10 = 0$

11) $2x^2 - x - 3 = 0$ 12) $6x^2 + x - 2 = 0$

Solve each quadratic equation by "Completing the Square"

13) $x^2 - 6x - 7 = 0$ 14) $x^2 + 8x + 3 = 0$

15) $x^2 + 4x + 12 = 0$ 16) $x^2 + 3x - 6 = 0$

Use the "Discriminant" to find the number of solutions for each quadratic equation: $b^2 - 4ac$

17) $x^2 + 3x + 5 = 0$ 18) $x^2 + 7x - 6 = 0$ 19) $x^2 + 16x + 64 = 0$

20) $x^2 - 4x - 3 = 0$ 21) $2x^2 - 3x + 5 = 0$ 22) $3x^2 - 2x - 4 = 0$

Use the "Quadratic Formula" to find the solutions for the following quadratic equations: $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

23) $x^2 + 4x - 7 = 0$ 24) $2x^2 - 3x - 1 = 0$ 25) $3x^2 + 2x + 2 = 0$