

# Notes: Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Standard Form:

Solutions to a quadratic are where it crosses the \_\_\_\_\_.

Solutions are also called \_\_\_\_\_ or \_\_\_\_\_.

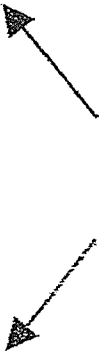
To find the solution to a quadratic equation that can't be factored, use the quadratic formula.

Examples:

1.  $3x^2 + 4x + 1 = 0$

a = \_\_\_\_\_ b = \_\_\_\_\_ c = \_\_\_\_\_

$$x = \frac{-\sqrt{(\quad)^2 - 4(\quad)(\quad)}}{2(\quad)}$$



x = \_\_\_\_\_ x = \_\_\_\_\_

2.  $x^2 + 2x - 4 = 0$

a = \_\_\_\_\_ b = \_\_\_\_\_ c = \_\_\_\_\_



x = \_\_\_\_\_ x = \_\_\_\_\_

3.  $5 = 2x^2 + x$

a = \_\_\_\_\_ b = \_\_\_\_\_ c = \_\_\_\_\_



x = \_\_\_\_\_ x = \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_

## Using the Quadratic Formula

Solve each equation with the quadratic formula.

1)  $m^2 - 5m - 14 = 0$

2)  $b^2 - 4b + 4 = 0$

3)  $2m^2 + 2m - 12 = 0$

4)  $2x^2 - 3x - 5 = 0$

5)  $x^2 + 4x + 3 = 0$

6)  $2x^2 + 3x - 20 = 0$

7)  $4b^2 + 8b + 7 = 4$

8)  $2m^2 - 7m - 13 = -10$