

Name:

Date:

Period:

**DIRECTIONS:** Use the quadratic formula to solve each equation. Show all work on separate piece of paper.

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

2.  $x^2 - 14 = 5x$

3.  $6x^2 + 3 = 11x$

4.  $5x^2 = 8x + 4$

5.  $2x^2 - x = 15$

6.  $\frac{1}{2}x^2 - 3x + 2 = 0$

7.  $2x^2 + 3x - 5 = 0$

8.  $2x = x^2 - 4$

9.  $5x + 2 = 3x^2$

10.  $2x^2 - 8x + 1 = 0$

.....  
**Find the number of real solutions of each equation using the discriminant. Show all work on separate piece of paper.**

1.  $9x^2 - 6x + 1 = 0$

2.  $3x^2 + 10x + 2 = 0$

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

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

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

6.  $x^2 - 9x - 4 = 0$

7.  $x^2 + 8x + 16 = 0$

8.  $2x^2 + 12x = -7$

9.  $\frac{1}{4}x^2 = -x - 1$

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