Homework 1
Due 9/3/2010 in class

Name: _____   **Section Number:** _____

This cover sheet must be attached as the top page of your homework.

1. For the two points $P(-4, 2)$ and $Q(2, 2)$, plot the points on a Cartesian plane, find the distance between them, and find the coordinates of the midpoint of the line segment $\bar{PQ}$.

2. Solve the following equation for t:
$$|5t + 3| = 6.$$

3. Solve the following inequality:
$$x^2 + 3x - 4 > 0.$$

4. Solve the following inequality:
$$|8 - 2s| \le 12$$

5. Find the center and radius of the following circle. Sketch a graph of the circle.
$$2x^2 + 2y^2 + 2x - 6y - 9 = 0.$$

6. Find the slope, y-intercept, and x-intercept of the following line. Sketch a graph of the line.
$$5x + 3y - 15 = 0.$$

7. Find the equation in standard form for the line that passes through the point $(1, 4)$ and perpendicular to the line $3x + 4y - 5 = 0$.

8. Find the equation in standard form for the line passing through $(4, 5)$ parallel to the line passing through $(2, 1)$ and $(5, 9)$.