Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Unit Test 1 Review

**Part I (MUST SHOW ALL WORK FOR CREDIT!!!)**

1) What is the slope of a line perpendicular to the line whose equation is 3*y* = −2*x* + 9?

2) Which equation represents a line parallel to the line whose equation is 5*y* − 10*x* = 10?

a) 4y – 8x = 10 b) 5*y* + 10*x* = 10 c) 4*y* + 8*x* = 12 d) 10*y* + 5*x* = 8

3) What is an equation of the line that contains the point (-2,5) and is perpendicular to the line whose equation is *y* = −4*x* + 4?

4) What is an equation of the line that passes through the point (3,-2) and is parallel to the line
3*x* + 4*y* = 12?

5) What is an equation for the circle shown in the graph below?



6) A circle has the equation (*x*  + 3)² + (*y*  - 2)² = 25. What are the coordinates of its center and
 the length of its radius?

7) The endpoints of CD are C(8,-4) and D(3,-2). What are the coordinates of the midpoint of CD?

8) What is the length of the line segment whose endpoints are A(-11,9) and B(8,2)?

**Part II (Short Answer – SHOW ALL WORK)**

9) In the diagram below of circle C, QR is a diameter and Q(5,-8) and C(5.5,-3) are points on a coordinate plane. Find and state the coordinates of point R.

10) Write the equation of the circle with diameter 4 and center (-8, 2).

11) Write the equation of the circle given a diameter with endpoints (2,6) and (-4,-8)

12) Write an equation of the perpendicular bisector of the line segment whose endpoints are (−1, 1) and (7, −5).

13) Put the following in simplest radical form $\sqrt{108}$

14) Solve the following system of equations graphically



b) (*x* − 3)² + (*y* + 2)² = 16

 x = 3

