05-04-Sample Quiz-Coordinate Circles

Multiple Choice
*Identify the choice that best completes the statement or answers the question.*

1. Which equation below best describes the circle shown in the graph?

   a. \((x + 3)^2 + (y - 2)^2 = 2\)
   
   b. \((x + 3)^2 + (y - 2)^2 = 4\)
   
   c. \((x - 3)^2 + (y + 2)^2 = 2\)
   
   d. \((x - 3)^2 + (y + 2)^2 = 4\)
2. Which of the below graphs best represents the equation $4x^2 + 4y^2 = 36$?

- a.  
- b.  
- c.  
- d.  

3. Determine the center and radius of the circle whose equation is $(x - 3)^2 + (y + 1)^2 = 49$.

- a. center: (3,-1), radius = 49  
- b. center: (-3,1), radius = 49  
- c. center: (-3,1), radius = 7  
- d. center: (3,-1), radius = 7  

4. You have purchased a new farm. Your lawn will be watered by central pivot irrigation, where sprinklers rotate around a central point. If the line of sprinklers turning around the central pivot is 300 ft long, write an equation to model the circular boundary of your sprinkler. Assume the center is (0,0).

- a. $x^2 + y^2 = 360000$  
- b. $x^2 + y^2 = 90000$  
- c. $x^2 + y^2 = 900$  
- d. $x^2 + y^2 = 3600$  

5. Given the standard formula of a circle is $x^2 + y^2 = 4$, what is the area of the circle? (Hint: $A \cap = \pi \cdot r^2$)

- a. $2\pi$ square units  
- b. $4\pi$ square units  
- c. $8\pi$ square units  
- d. $16\pi$ square units
6. If the endpoints of a diameter of a circle are (6, 2) and (0,2), what is the equation of the circle?

a. \((x - 3)^2 + (y - 2)^2 = 9\)  
c. \((x - 6)^2 + (y + 4)^2 = 9\)

b. \((x + 3)^2 + (y + 2)^2 = 3\)  
d. \((x - 6)^2 + (y + 4)^2 = 3\)

7. What is the center of the circle described by the equation \(x^2 + 4x + y^2 - 6y = 12\) ?

a. \((4, -6)\)  
c. \((-2, 3)\)

b. \((-4, 6)\)  
d. \((2, -3)\)
8. Which graph below best describes the circle determined by the equation $x^2 + 4x + y^2 - 2y = 11$?

- a.
- b.
- c.
- d.