

## Writing Equations of Circles

1. Write each equation in standard form and state the center and radius.

a.  $x^2 + y^2 + 14x - 12y + 4 = 0$

b.  $2x^2 + 2y^2 + 6x - 8y + 12 = 0$

c.  $x^2 + y^2 + 5x - 6y = \frac{3}{4}$

d.  $4x^2 + 4y^2 - 4x + 24y - 27 = 0$

2. Write an equation of a circle with a center that is  $(3, -2)$  and passes through the point  $(-5, 8)$ .

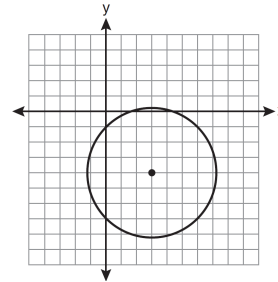
3. Write an equation of a circle whose diameter has endpoints  $(4, -1)$  and  $(-6, 7)$ .

4. Write an equation of a circle that is tangent to the  $x$ -axis, with a center that is  $(-2, 4)$ .

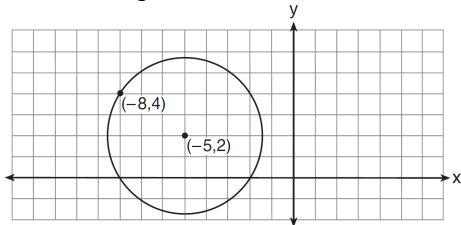
5. Which equation represents the circle shown in the graph below that passes through the point  $(0, -1)$ ?

(1)  $(x - 3)^2 + (y + 4)^2 = 16$       (3)  $(x + 3)^2 + (y - 4)^2 = 16$

(2)  $(x - 3)^2 + (y + 4)^2 = 18$       (4)  $(x + 3)^2 + (y - 4)^2 = 18$



6. Write an equation of the circle shown in the diagram below.



7. Write an equation of the circle shown in the graph below.

