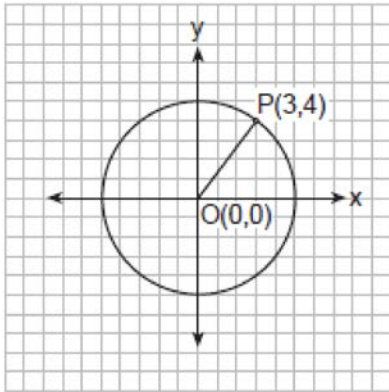


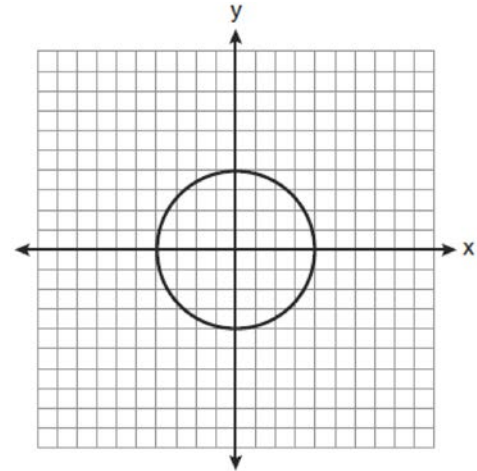
**G.G.72: Equations of Circles 1: Write the equation of a circle, given its graph**

- 1 In the accompanying diagram, the center of circle  $O$  is  $(0, 0)$ , and the coordinates of point  $P$  are  $(3, 4)$ . If  $\overline{OP}$  is a radius, what is the equation of the circle?



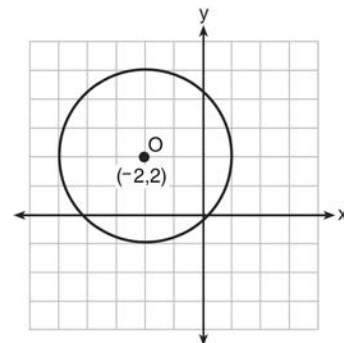
- 1)  $x^2 + y^2 = 5$
- 2)  $x^2 + y^2 = 9$
- 3)  $x^2 + y^2 = 16$
- 4)  $x^2 + y^2 = 25$

- 2 What is an equation for the circle shown in the graph below?



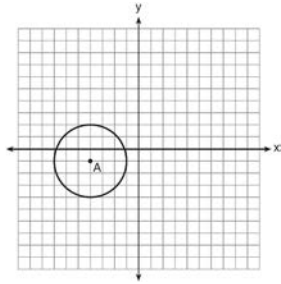
- 1)  $x^2 + y^2 = 2$
- 2)  $x^2 + y^2 = 4$
- 3)  $x^2 + y^2 = 8$
- 4)  $x^2 + y^2 = 16$

- 3 What is an equation of circle  $O$  shown in the graph below?



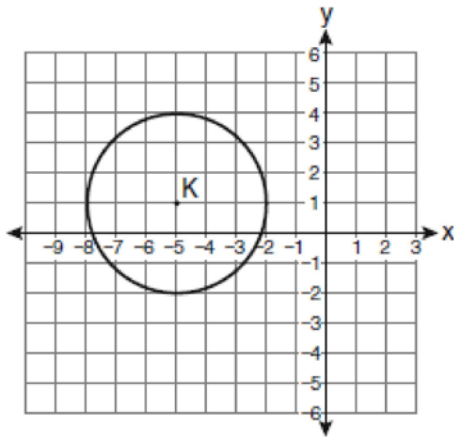
- 1)  $(x + 2)^2 + (y - 2)^2 = 9$
- 2)  $(x + 2)^2 + (y - 2)^2 = 3$
- 3)  $(x - 2)^2 + (y + 2)^2 = 9$
- 4)  $(x - 2)^2 + (y + 2)^2 = 3$

- 4 Which equation represents circle  $A$  shown in the diagram below?



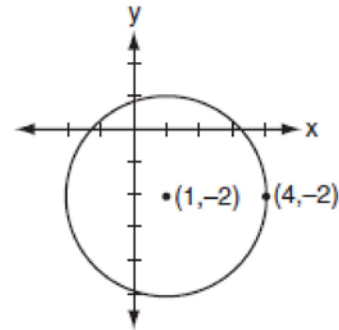
- 1)  $(x - 4)^2 + (y - 1)^2 = 3$
- 2)  $(x + 4)^2 + (y + 1)^2 = 3$
- 3)  $(x - 4)^2 + (y - 1)^2 = 9$
- 4)  $(x + 4)^2 + (y + 1)^2 = 9$

- 5 Which equation represents circle  $K$  shown in the graph below?



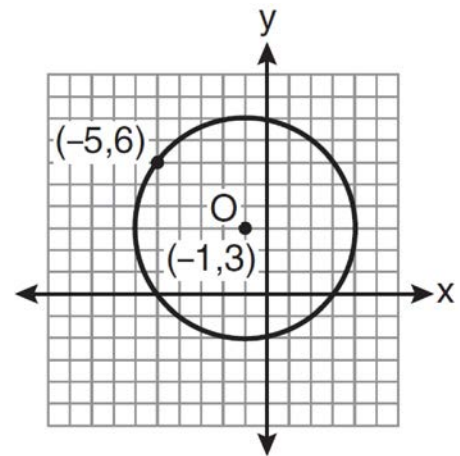
- 1)  $(x + 5)^2 + (y - 1)^2 = 3$
- 2)  $(x + 5)^2 + (y - 1)^2 = 9$
- 3)  $(x - 5)^2 + (y + 1)^2 = 3$
- 4)  $(x - 5)^2 + (y + 1)^2 = 9$

- 6 Which equation represents the circle shown in the accompanying graph?



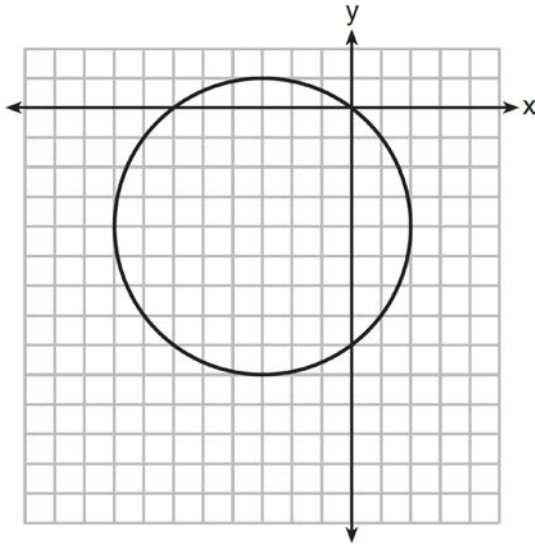
- 1)  $(x - 1)^2 - (y + 2)^2 = 9$
- 2)  $(x - 1)^2 + (y + 2)^2 = 9$
- 3)  $(x + 1)^2 - (y - 2)^2 = 9$
- 4)  $(x + 1)^2 + (y - 2)^2 = 9$

- 7 What is an equation of circle  $O$  shown in the graph below?



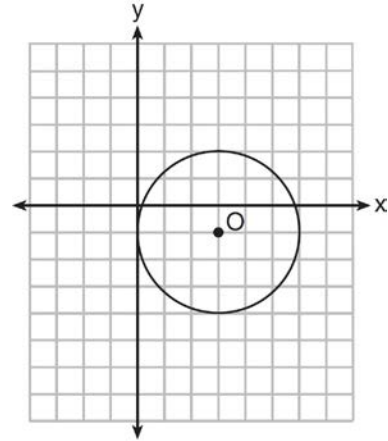
- 1)  $(x + 1)^2 + (y - 3)^2 = 25$
- 2)  $(x - 1)^2 + (y + 3)^2 = 25$
- 3)  $(x - 5)^2 + (y + 6)^2 = 25$
- 4)  $(x + 5)^2 + (y - 6)^2 = 25$

- 8 What is an equation of the circle shown in the graph below?



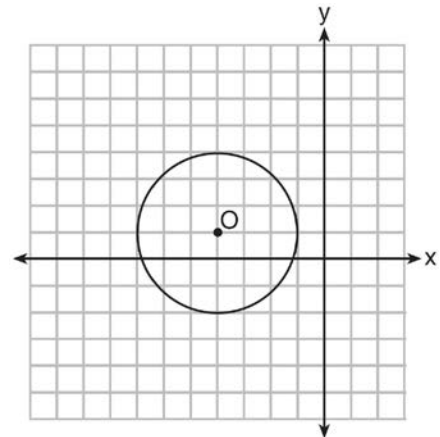
- 1)  $(x - 3)^2 + (y - 4)^2 = 25$
- 2)  $(x + 3)^2 + (y + 4)^2 = 25$
- 3)  $(x - 3)^2 + (y - 4)^2 = 10$
- 4)  $(x + 3)^2 + (y + 4)^2 = 10$

- 9 What is the equation for circle  $O$  shown in the graph below?



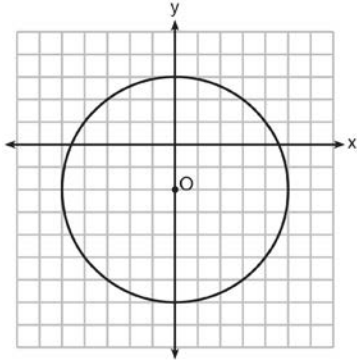
- 1)  $(x - 3)^2 + (y + 1)^2 = 6$
- 2)  $(x + 3)^2 + (y - 1)^2 = 6$
- 3)  $(x - 3)^2 + (y + 1)^2 = 9$
- 4)  $(x + 3)^2 + (y - 1)^2 = 9$

- 10 What is the equation of circle  $O$  shown in the diagram below?



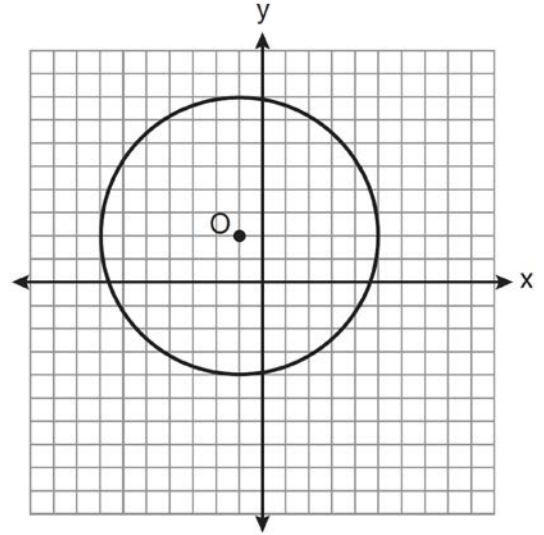
- 1)  $(x + 4)^2 + (y - 1)^2 = 3$
- 2)  $(x - 4)^2 + (y + 1)^2 = 3$
- 3)  $(x + 4)^2 + (y - 1)^2 = 9$
- 4)  $(x - 4)^2 + (y + 1)^2 = 9$

11 Which equation represents circle  $O$  shown in the graph below?



- 1)  $x^2 + (y - 2)^2 = 10$
- 2)  $x^2 + (y + 2)^2 = 10$
- 3)  $x^2 + (y - 2)^2 = 25$
- 4)  $x^2 + (y + 2)^2 = 25$

13 Write an equation for circle  $O$  shown on the graph below.



12 Write an equation of the circle graphed in the diagram below.

