Name

# 12-2B Lesson Master

**Questions on SPUR Objectives**
See Student Edition pages 862–865 for objectives.

## SKILLS Objective B

**In 1 and 2, give an equation for the circle with the given characteristics.**

1. center (1.3, –2.7); radius 5 _____

2. center $(0, \frac{1}{3})$; radius $\frac{5}{7}$ _____

## PROPERTIES Objective E

**In 3 and 4, an equation for a circle is given. Find the center and radius.**

3. $(x-4)^2 + (y+6)^2 = 36$ center: _____ radius: _____

4. $(x-a)^2 + (y-b)^2 = c^2$ center: _____ radius: _____

5. Find the coordinates of all points on the circle $(x-5)^2 + (y+2)^2 = 20$, where $y = 0$. _____

## PROPERTIES Objective F

**In 6–8, determine whether the figure described is a *parabola*, a *circle*, or *neither*.**

6. The set of all points 3 units from $(\sqrt{5}, 3)$. _____

7. The set of all points equidistant from (4, 13) and $y = 7.7$. _____

8. The set of all points equidistant from (3.7, 2.9) and (6.2, 0.9). _____

## USES Objective G

9. A seismograph located 10 miles due north of a recording station detects an earthquake with epicenter 15 miles away.

   a. Write an equation that could be used to describe possible locations of the epicenter. _____

   b. A woman was 8 miles due east of the station when the earthquake occurred. Use your answer to Part a to determine whether the epicenter could have been right below her. _____

10. A sprinkler shoots a 10-foot stream of water in all directions. Consider a graph in which each unit represents one foot. Place the sprinkler at the origin.

    a. Write an equation to represent the boundary of the sprinkled area. _____

    b. A prize rose bush is located 8 ft east and 6 ft north of the sprinkler. Will the rose bush get sprinkled? Explain your thinking.

    _____

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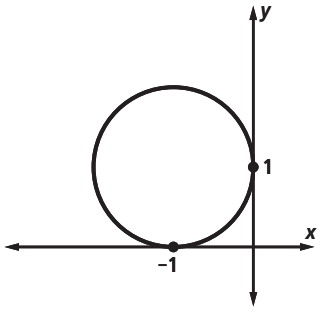
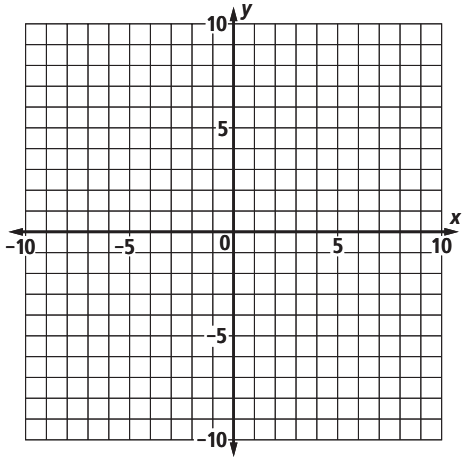
## REPRESENTATIONS Objective I

**11.** Give an equation for the circle graphed at the right.

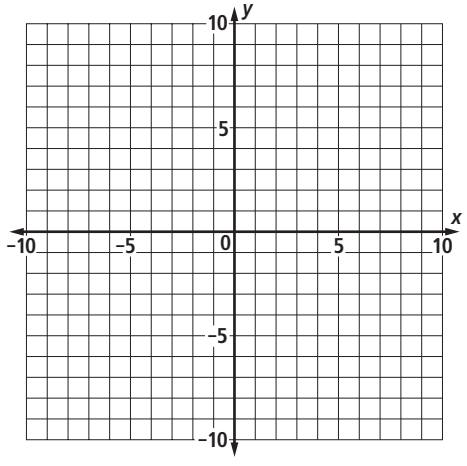



**12.** At the right, graph the circle $(x - 3)^2 + (y - 4)^2 = 25$.



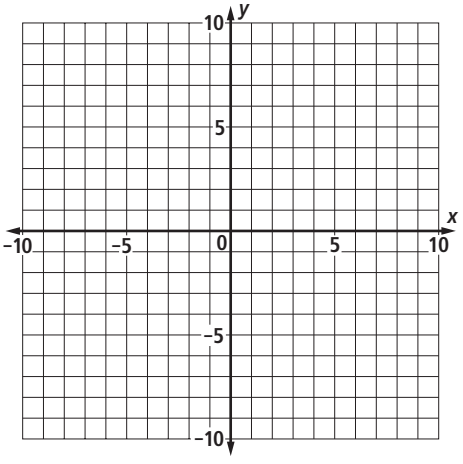

## REPRESENTATIONS Objective L

**13.** Graph all points a distance of 3 from (–2, 3) below.




**14.** The set of points 5 units from the origin is translated under $T_{0,-2}$.

**a.** Sketch a graph of the image and preimage below.




**b.** Give an equation for each set.