10-3

Practice

Form G

Circles

Write an equation of a circle with the given center and radius. Check your answers.

1. center $(0, 0)$, radius 3

3. center $(-1, 0)$, radius 6

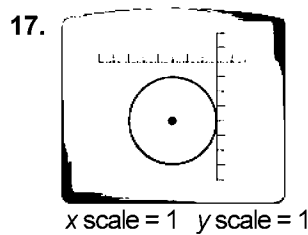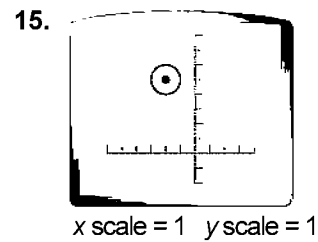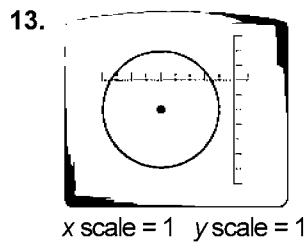**5.** center $(1, -5)$, radius 2.5

Write an equation for each translation.

7. $x^2 + y^2 = 9$; right 4 and down 2

9. $x^2 + y^2 = 49$; right 1 and up 7

11. $x^2 + y^2 = 25$; up 10

Write an equation for each circle. Each interval represents one unit.

13.

x scale = 1   *y* scale = 1

15.

x scale = 1   *y* scale = 1

17.

x scale = 1   *y* scale = 1

For each equation, find the center and radius of the circle.

19. $(x + 1)^2 + (y - 8)^2 = 1$

21. $(x + 3)^2 + (y + 1)^2 = 2$

23. $(x - 6)^2 + (y - 9)^2 = 4$

Use the center and the radius to graph each circle.

25. $(x + 9)^2 + (y - 2)^2 = 81$

27. $(x - 8)^2 + (y + 9)^2 = 64$

29. Writing Describe in words how to change the equation of a circle with the center at the origin and radius 5 to a circle with the center 3 units right and 2 units up.

31. Error Analysis A classmate writes the equation of a circle with the center at $(8.5, 0)$ and diameter 25 as $x + (y - 8.5)^2 = 156.25$. Is she correct? Why or why not?