

# 4-1

## Practice

### Circles

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

1. center (0, 0), radius 3

2. center (0, 1), radius 2

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

4. center (2, 0), radius 1

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

6. center (2, 3), diameter 1

Write an equation for each translation.

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

8.  $x^2 + y^2 = 12$ ; left 2 and up 5

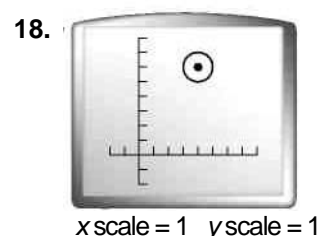
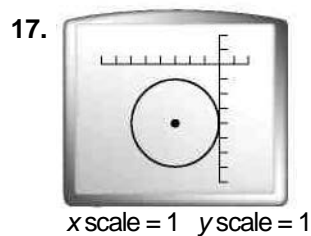
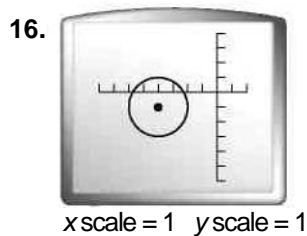
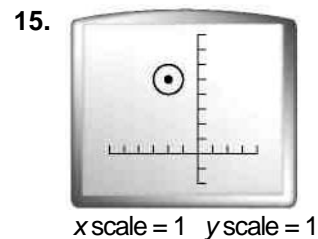
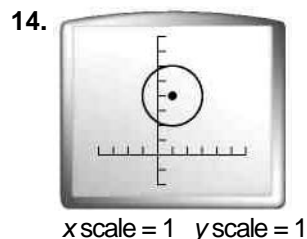
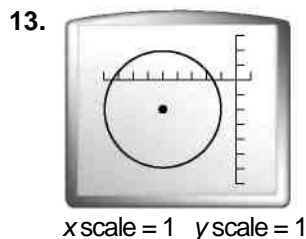
9.  $x^2 + y^2 = 49$ ; right 1 and up 7

10.  $x^2 + y^2 = 1$ ; right 5 and up 5

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

12.  $x^2 + y^2 = 36$ ; left 8 and down 6

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



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

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

20.  $x^2 + (y + 3)^2 = 9$

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

22.  $(x - 6)^2 + y^2 = 5$

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

24.  $x^2 + y^2 = 144$

# 4-1

## Practice (continued)

### Circles

Use the center and the radius to graph each circle.

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

26.  $x^2 + (y + 3)^2 = 121$

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

28.  $(x + 8)^2 + y^2 = 49$