

# 11-1 Circles $(x - h)^2 + (y - k)^2 = r^2$

Name \_\_\_\_\_

**Give the center of each circle and the radius defined by each given equation.**

1.  $(x - 4)^2 + (y - 2)^2 = 25$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

2.  $(x + 3)^2 + (y - 1)^2 = 16$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

3.  $(x - 1)^2 + (y + 7)^2 = 81$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

4.  $x^2 + (y - 2)^2 = 4$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

5.  $(x - 9)^2 + y^2 = 1$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

6.  $(x - 2)^2 + (y + 2)^2 = 9$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

7.  $(x - 1)^2 + (y - 1)^2 = 25$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

8.  $x^2 + y^2 = 49$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

9.  $x^2 + (y + 8)^2 = 121$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

10.  $(x + 1)^2 + (y - 1)^2 = 100$       Center = \_\_\_\_\_      Radius = \_\_\_\_\_

**Give the equation of the circle that has the given center and given radius.**

11. Center =  $(2, 5)$       Radius = 3      Equation = \_\_\_\_\_

12. Center =  $(-1, 2)$       Radius = 2      Equation = \_\_\_\_\_

13. Center =  $(0, -3)$       Radius = 7      Equation = \_\_\_\_\_

14. Center =  $(2, -7)$       Radius = 12      Equation = \_\_\_\_\_

15. Center =  $(5, 5)$       Radius = 6      Equation = \_\_\_\_\_

16. Center =  $(0, 5)$       Radius = 9      Equation = \_\_\_\_\_

17. Center =  $(1, -4)$       Radius = 2      Equation = \_\_\_\_\_

18. Center =  $(0, 0)$       Radius = 1      Equation = \_\_\_\_\_

19. Center =  $(2, 0)$       Radius = 8      Equation = \_\_\_\_\_

20. Center =  $(1, -1)$  Radius = 1 Equation = \_\_\_\_\_