Circles Worksheet Name: _____

Find the center and radius of each.

1. $x^2 + y^2 = 49$

2. $(x + 2)^2 + (y - 3)^2 = 183$

3. $x^2 + y^2 = 324$

4. $(x + 7)^2 + (y + 8)^2 = 64$

5. $x^2 + (y + 2)^2 = 121$

6. $(x - 14)^2 + (y - 5)^2 = 4$

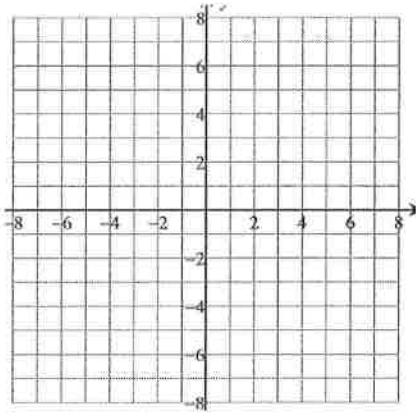
7. $(x + 10)^2 + (y + 9)^2 = 8$

8. $(x + 12)^2 + (y - 21)^2 = 125$

State the center and radius of each equation and graph.

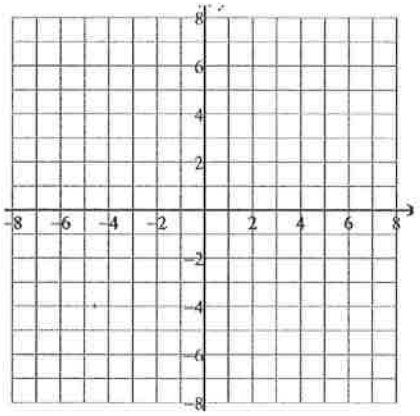
9. $(x + 1)^2 + (y - 2)^2 = 9$

Center: Radius:



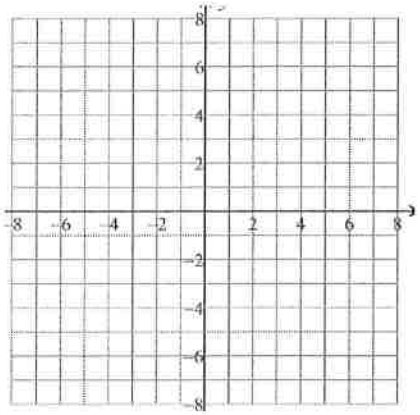
10. $(x + 2)^2 + (y + 3)^2 = 16$

Center: Radius



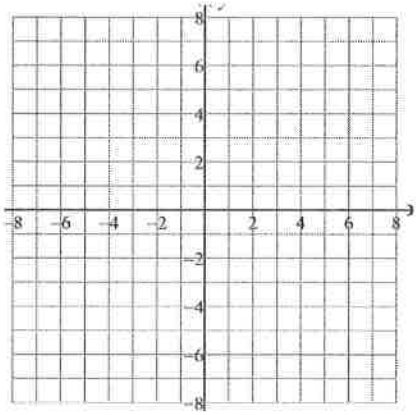
11. $(x - 5)^2 + (y + 6)^2 = 4$

Center: Radius:



12. $(x - 3)^2 + (y - 3)^2 = 8$

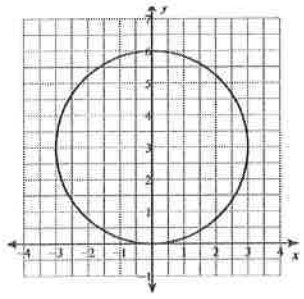
Center: Radius:

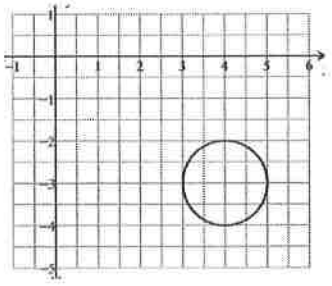


Use the information given to write the standard form equation of each circle.

13. Center: (-11, -8)
    Radius: 4

14. Center: (-6, -15)
    Radius: $\sqrt{5}$

15. 

16. 

Complete the square. Find the standard form of each circle and state the center and radius.

17. $x^2 + 24x + y^2 + 10y + 160 = 0$

18. $x^2 + 26x + y^2 + 28y + 364 = 0$

19. $x^2 - 6x + y^2 - 32y = -264$

20. $-6x + x^2 = 97 + 10y - y^2$

BONUS: Do work on a separate sheet of paper. Must show work to receive any credit.

1. Write the equation of the circle that has endpoints of its diameter at (-17, -9) and (-19, -9)
2. Write the equation of the circle whose center is (-10, 3) and whose circumference is 8π