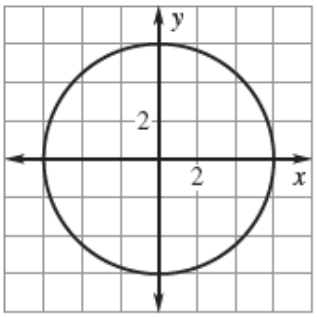
Geometry
Equations of Circles Extra Practice

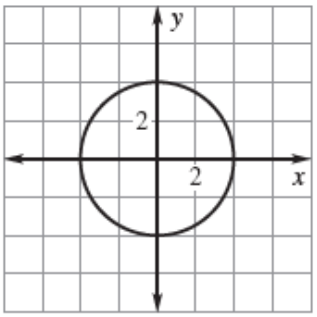
Name _____
Date _____ Period _____

Write the standard equation of the circle.

1.



2.



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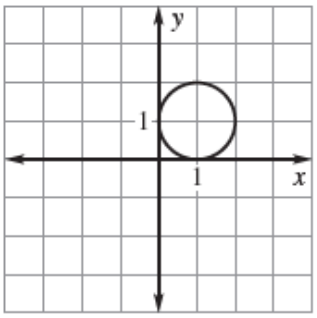
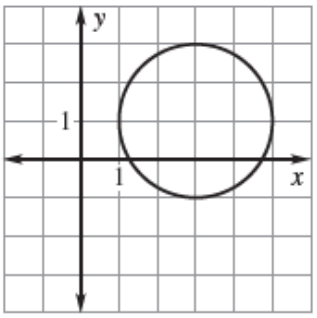


4.



Write the standard equation of the circle with the given center and radius.

5. Center (0, 0), radius 9

6. Center (1, 3), radius 4

7. Center (−3, 0), radius 5

8. Center (4, −7), radius 13

9. Center (0, 14), radius 14

10. Center (−12, 7), radius 6

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

11. The center is (0, 0), and a point on the circle is (4, 0).

12. The center is (0, 0), and a point on the circle is (3, −4).

13. The center is (2, 4), and a point on the circle is (−3, 16).

14. The center is (3, −2), and a point on the circle is (23, 19).

15. The center is (−43, 5), and a point on the circle is (−34, 17).

16. The center is (17, 24), and a point on the circle is (−3, 9).

Determine the diameter of the circle with the given equation.

17. $x^2 + y^2 = 100$

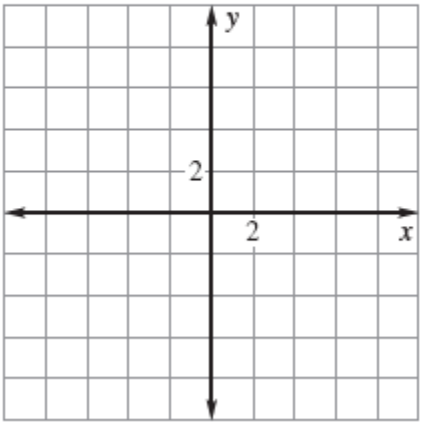
18. $(x - 12)^2 + (y + 5)^2 = 64$

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

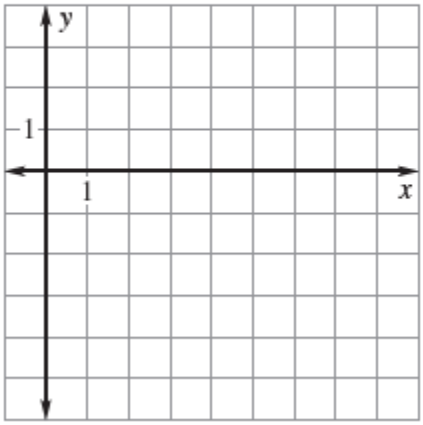
20. $(x + 16)^2 + (y + 15)^2 = 81$

Graph the equation.

21. $x^2 + y^2 = 64$



22. $(x - 4)^2 + (y + 1)^2 = 16$



23. Center: $(2, -5)$
Point on Circle: $(-7, -1)$

24. Center: $(14, 17)$
Point on Circle: $(15, 17)$

25. $8x + x^2 - 2y = 64 - y^2$

26. $y^2 + 2x + x^2 = 24y - 120$