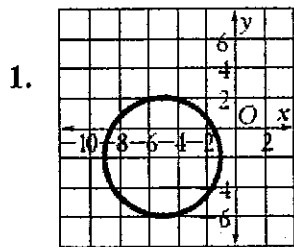
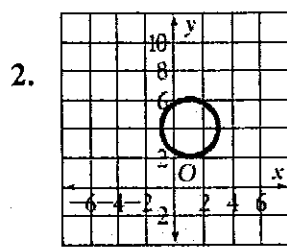


Alg. 2 Practice 10-3 Circles

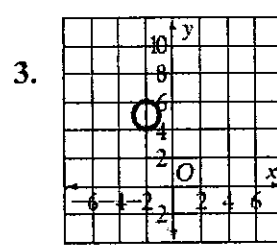
Write an equation in standard form for each circle.



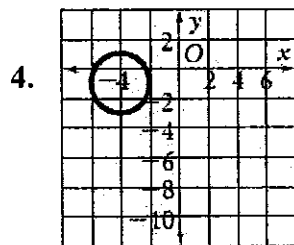
$R = \underline{\hspace{1cm}} (\underline{-4}, \underline{0})$



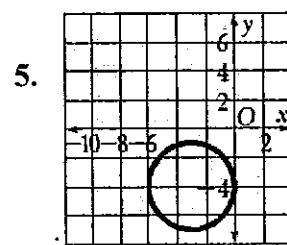
$R = \underline{\hspace{1cm}} (\underline{0}, \underline{4})$



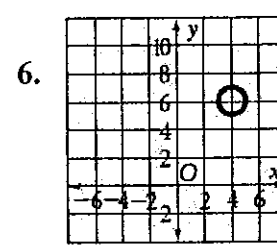
$R = \underline{\hspace{1cm}} (\underline{-2}, \underline{5})$



$R = \underline{\hspace{1cm}} (\underline{-1}, \underline{0})$



$R = \underline{\hspace{1cm}} (\underline{4}, \underline{-4})$



$R = \underline{\hspace{1cm}} (\underline{4}, \underline{6})$

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

7. center (0, 0), radius 3

8. center (0, 1), radius 2

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

10. center (2, 0), radius 1

11. center (0, -3), radius 5

12. center (4, -4), radius 1.5

13. center (-2, 6), radius 4

14. center (5, -1), radius 1.1

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

16. center (2, 3), diameter 1

Write an equation for each translation.

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

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

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

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

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

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

Find the center and radius of each circle.

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

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

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

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

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

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

Use the center and radius to graph each circle.

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

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

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

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

33. $(x - 6)^2 + (y - 3)^2 = 75$

34. $(x + 9)^2 + (y + 9)^2 = 36$

35. $(x + 7)^2 + (y + 2)^2 = 80$

36. $(x - 5)^2 + (y + 7)^2 = 25$

10.3

11.2 Circles

Name

p. 564 (10-14, 17-23)

For Problems (1-8): Write the equation of the circle in standard form.

Identify the radius and center.

Sketch the graph.

**Front only
except 8**

1.) $x^2 + y^2 - 12x + 18y - 4 = 0$

2.) $x^2 + y^2 + 6x - 4y + 4 = 0$

3.) $x^2 + y^2 - 2x + 6y - 6 = 0$

4.) $x^2 + y^2 - 8x - 20y + 115 = 0$

5.) $x^2 + y^2 - 6x - 8y + 21 = 0$

6.) $x^2 + y^2 + 10x - 6y + 33 = 0$

7.) $x^2 + y^2 - 4x - 6y + 4 = 0$

~~8.) $4x^2 + 4y^2 - 20x - 16y + 37 = 0$~~

Find the equation for the conic.

9.) Center: (9, 3) Radius: 4

10.) Center: (-3, 1) Radius: 9

11.) Center: (-4, -6) Radius: 7

12.) Center: (5, -7) Radius: 12

In 13-16, write the standard form of the equation of the circle with the given radius and whose center is the origin.

13. 2

14. $\sqrt{6}$

15. $\frac{1}{3}$

16. $\frac{\sqrt{5}}{5}$

In 17-20, write the standard form of the equation of the circle that passes through the given point and whose center is the origin.

17. (4, 6)

18. (-5, 0)

19. (-2, 4)

20. (5, -2)

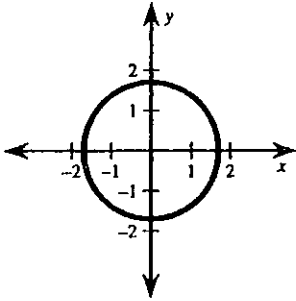
In 21-23, match the equation with its graph.

21. $x^2 + y^2 = 16$

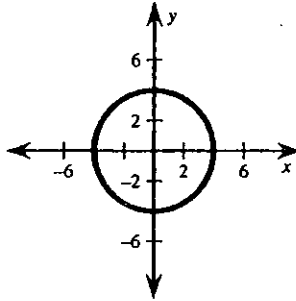
22. $x^2 + y^2 = 36$

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

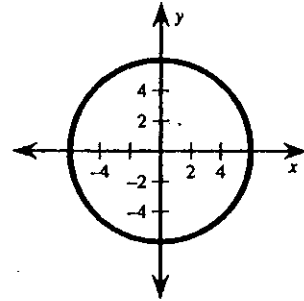
a.



b.



c.



In 24-27, find the points of intersection, if any, of the graphs.

24. $x^2 + y^2 = 45$
 $y = 2x$

25. $x^2 + y^2 = 25$
 $y = x + 1$

26. $x^2 + y^2 = 36$
 $x + y = 12$

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

28. **Three Rivers Stadium** Three Rivers Stadium is the home of the Pittsburgh Pirates. The stadium is approximately circular with a diameter of 800 feet. Suppose a coordinate plane were superimposed over the base of the stadium with the origin at the center of the stadium. Write an equation (in standard form) for the outside boundary of the stadium.

