

Practice 11-5

Circles in the Coordinate Plane

Find the center and radius of each circle.

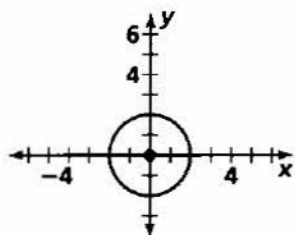
- | | |
|---------------------------------|----------------------------------|
| 1. $x^2 + y^2 = 36$ | 2. $(x - 2)^2 + (y - 7)^2 = 49$ |
| 3. $(x + 1)^2 + (y + 6)^2 = 16$ | 4. $(x + 3)^2 + (y - 11)^2 = 12$ |

Write the standard equation of each circle.

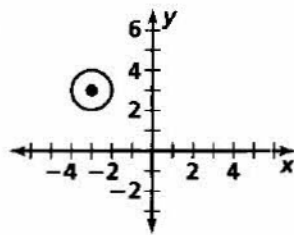
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|---|---------------------------------------|---------------------------------------|
| 5. center $(0, 0)$; $r = 7$ | 6. center $(4, 3)$; $r = 8$ | 7. center $(5, 3)$; $r = 2$ |
| 8. center $(-5, 4)$; $r = \frac{1}{2}$ | 9. center $(-2, -5)$; $r = \sqrt{2}$ | 10. center $(-1, 6)$; $r = \sqrt{5}$ |

Write an equation for each circle.

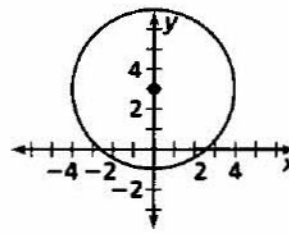
11.



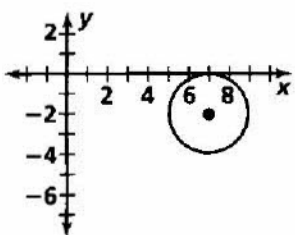
12.



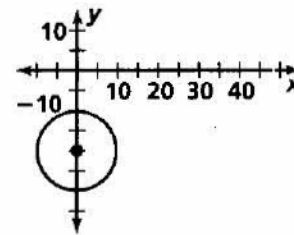
13.



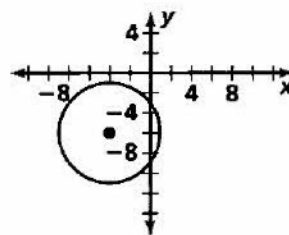
14.



15.



16.



Graph each circle. Label its center, and state its radius.

- | | |
|----------------------------------|----------------------------------|
| 17. $x^2 + y^2 = 25$ | 18. $(x - 3)^2 + (y - 5)^2 = 9$ |
| 19. $(x + 2)^2 + (y + 4)^2 = 16$ | 20. $(x + 1)^2 + (y - 1)^2 = 36$ |

Write an equation for each circle with the given center that passes through the given point.

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|--|---|
| 21. center $(0, 0)$; point $(3, 4)$ | 22. center $(5, 9)$; point $(2, 9)$ |
| 23. center $(-4, -3)$; point $(2, 2)$ | 24. center $(7, -2)$; point $(-1, -6)$ |

Write an equation that describes the position and range of each circle.

25. $\odot B$
 26. $\odot F$

