

Day 1 – 12.5 HW

p. 800 (1-4, 7-13 odd, 17, 21, 23)

Do you know HOW?

What is the standard equation of each circle?


- center $(0, 0)$; $r = 4$
- center $(1, -1)$; $r = \sqrt{5}$

What is the center and radius of each circle?

- $(x - 8)^2 + y^2 = 9$
- $(x + 2)^2 + (y - 4)^2 = 7$

Do you UNDERSTAND?  MATHEMATICAL PRACTICES

- What is the least amount of information that you need to graph a circle? To write the equation of a circle?
- Suppose you know the center of a circle and a point on the circle. How do you determine the equation of the circle?

 **7. Error Analysis** A student says that the center of a circle with equation $(x - 2)^2 + (y + 3)^2 = 16$ is $(-2, 3)$. What is the student's error?

Write the standard equation of each circle.

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|---------------------------------|--------------------------------|--|
| 8. center $(2, -8)$; $r = 9$ | 9. center $(0, 3)$; $r = 7$ | 10. center $(0.2, 1.1)$; $r = 0.4$ |
| 11. center $(5, -1)$; $r = 12$ | 12. center $(-6, 3)$; $r = 8$ | 13. center $(-9, -4)$; $r = \sqrt{5}$ |
| 14. center $(0, 0)$; $r = 4$ | 15. center $(-4, 0)$; $r = 3$ | 16. center $(-1, -1)$; $r = 1$ |

 See Problem 1.

Write a standard equation for each circle in the diagram at the right.

17. $\odot P$ 18. $\odot Q$

Write the standard equation of the circle with the given center that passes through the given point.

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|---|--|
| 19. center $(-2, 6)$; point $(-2, 10)$ | 20. center $(1, 2)$; point $(0, 6)$ |
| 21. center $(7, -2)$; point $(1, -6)$ | 22. center $(-10, -5)$; point $(-5, 5)$ |
| 23. center $(6, 5)$; point $(0, 0)$ | 24. center $(-1, -4)$; point $(-4, 0)$ |

 See Problem 2.

