NAME _____ DATE_____ PERIOD _____

10-3 Practice

Circles

Write an equation for the circle that satisfies each set of conditions.

1. center $(-4, 2)$, radius 8 units

2. center $(0, 0)$, radius 4 units

3. center $\left(-\frac{1}{4}, -\sqrt{3}\right)$, radius $5\sqrt{2}$ units

4. center $(2.5, 4.2)$, radius 0.9 unit

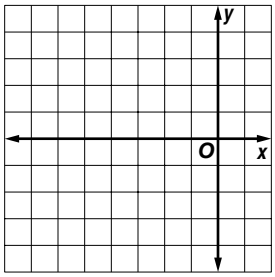
5. endpoints of a diameter at $(-2, -9)$ and $(0, -5)$

6. center at $(-9, -12)$, passes through $(-4, -5)$

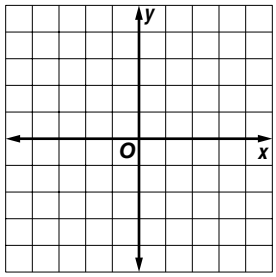
7. center at $(-6, 5)$, tangent to x-axis

Find the center and radius of the circle with the given equation. Then graph the circle.

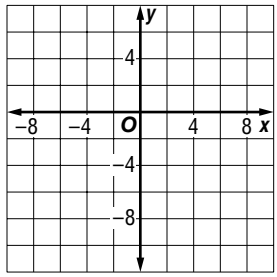
8. $(x + 3)^2 + y^2 = 16$



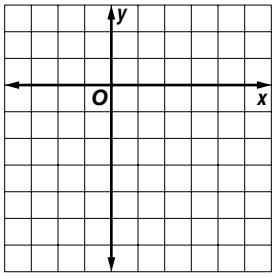
9. $3x^2 + 3y^2 = 12$



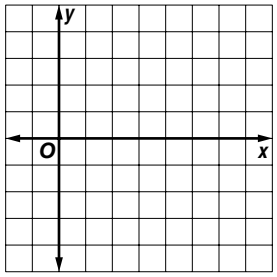
10. $x^2 + y^2 + 2x + 6y = 26$



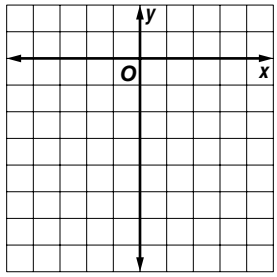
11. $(x - 1)^2 + y^2 + 4y = 12$



12. $x^2 - 6x + y^2 = 0$



13. $x^2 + y^2 + 2x + 6y = -1$



WEATHER For Exercises 14 and 15, use the following information.

On average, the circular eye of a hurricane is about 15 miles in diameter. Gale winds can affect an area up to 300 miles from the storm's center. In 2005, Hurricane Katrina devastated southern Louisiana. A satellite photo of Katrina's landfall showed the center of its eye on one coordinate system could be approximated by the point (80, 26).

14. Write an equation to represent a possible boundary of Katrina's eye.

15. Write an equation to represent a possible boundary of the area affected by gale winds.