Name _____ Date _____ Class _____

Write the equation of each circle.
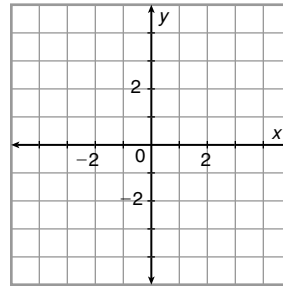
1. $\odot X$ centered at the origin with radius 10   _____

2. $\odot R$ with center $R(-1, 8)$ and radius 5   _____

3. $\odot P$ with center $P(-5, -5)$ and radius $2\sqrt{5}$ _____

4. $\odot O$ centered at the origin that passes
   through $(9, -2)$ _____

5. $\odot B$ with center $B(0, -2)$ that passes
   through $(-6, 0)$ _____

6. $\odot F$ with center $F(11, 4)$ that passes
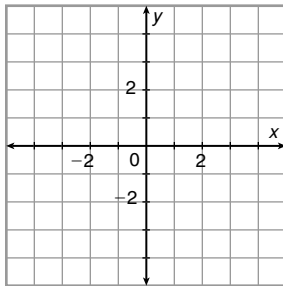   through $(-2, 5)$.   _____

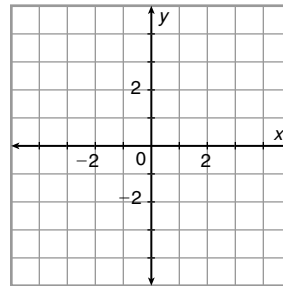**Graph each equation.**

7. $x^2 + y^2 = 25$
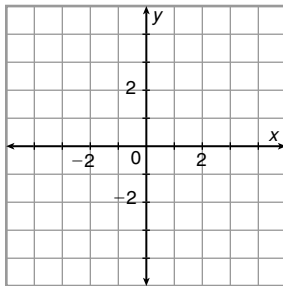
8. $(x + 2)^2 + (y - 1)^2 = 4$

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

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

**Crater Lake in Oregon is a roughly circular lake. The lake basin
formed about 7000 years ago when the top of a volcano exploded
in an immense explosion. Hillman Peak, Garfield Peak, and Cloudcap
are three mountain peaks on the rim of the lake. The peaks are
located in a coordinate plane at $H(-4, 1)$, $G(-2, -3)$, and $C(5, -2)$.**

11. Find the coordinates of the center of the lake.

   _____

12. Each unit of the coordinate plane represents $\frac{3}{5}$ mile.
    Find the diameter of the lake.   _____

75   **Holt Geometry**