Name _____ Date _____ Class_____

Practice B
Circles in the Coordinate Plane

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 $(-6, 0)$ _____

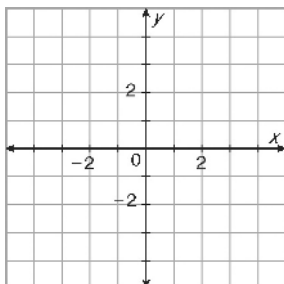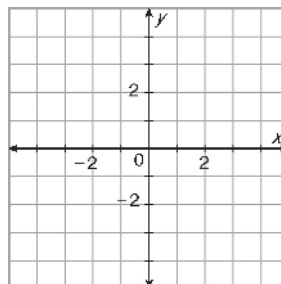6. $\odot F$ with center $F(11, 4)$ that passes through $(-2, 5)$. _____
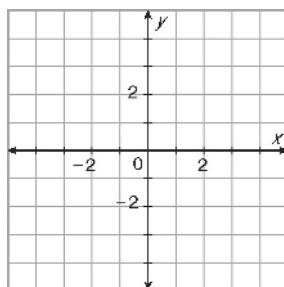
Graph each equation.
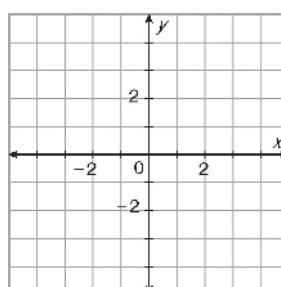
7. $x^2 + y^2 = 25$
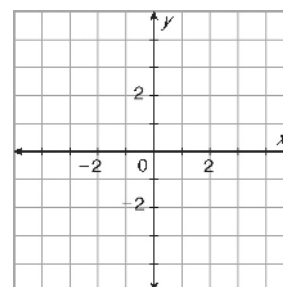

8. $(x + 2)^2 + (y - 1)^2 = 4$

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.

_____

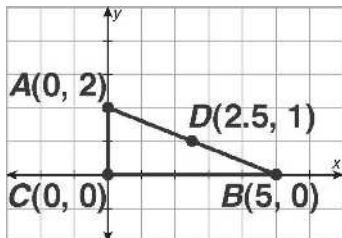12. Each unit of the coordinate plane represents $\frac{3}{5}$ mile.

Find the diameter of the lake. _____

Holt McDougal Analytic Geometry

Reading Strategies

1. with one side along one of the axes

2. with the side you want to find the midpoint of along an axis with the midpoint at the origin
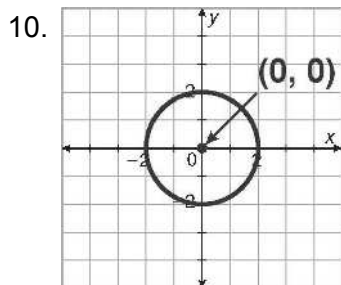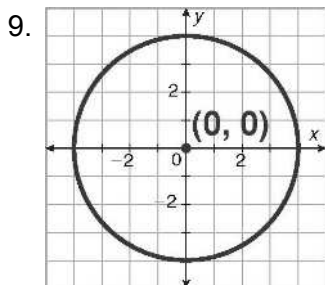

3. with one side along an axis

4. with $\overline{AB}$ straddling the origin on an axis

5. with one vertex at the origin and one side on an axis

6. with one vertex at the origin and one side on an axis

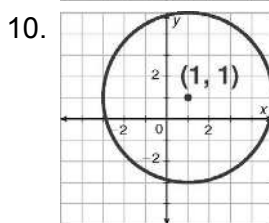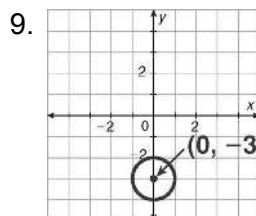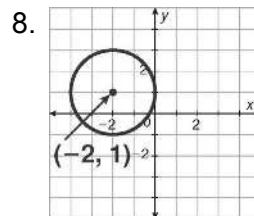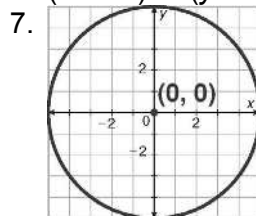## 17-2 CIRCLES IN THE COORDINATE PLANE

Practice A

1. $(x - h)^2 + (y - k)^2 = r^2$

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

3. $(x - 3)^2 + (y - 3)^2 = 4$

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

5. $x^2 + (y + 2)^2 = 81$ 6. $(x - 7)^2 + y^2 = 9$
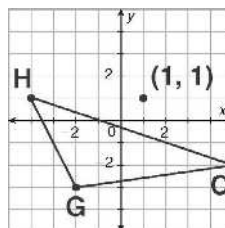
7. 10

8. $(x - 2)^2 + (y + 1)^2 = 100$

9.

10.

11.
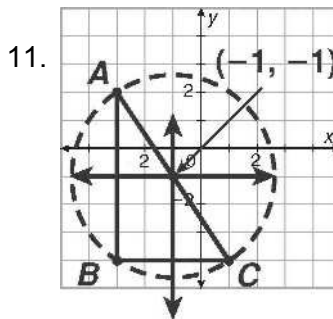
13. $(-1, -1)$

Practice B

1. $x^2 + y^2 = 100$

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

3. $(x + 5)^2 + (y + 5)^2 = 20$

4. $x^2 + y^2 = 85$

5. $x^2 + (y + 2)^2 = 40$

6. $(x - 11)^2 + (y - 4)^2 = 170$

7.

8.

9.

10.

11. $(1, 1)$

12. 6 miles

Practice C

1. 90°   2. obtuse

3. $3\sqrt{5}$

Holt McDougal Analytic Geometry