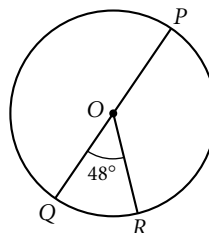


# Circles

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

For Exercises 1–4, use the figure at right.

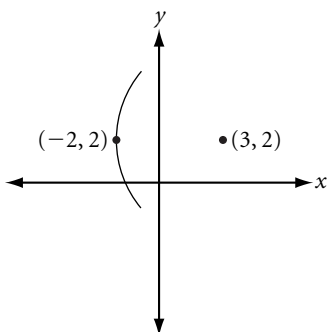


- 1.  $m\widehat{QR} =$  \_\_\_\_\_
- 2.  $m\widehat{PR} =$  \_\_\_\_\_
- 3.  $m\widehat{PQR} =$  \_\_\_\_\_
- 4.  $m\widehat{QPR} =$  \_\_\_\_\_

5. Sketch a circle with an inscribed pentagon.

6. Sketch a circle with a circumscribed quadrilateral.

7. A circle with center  $(3, 2)$  goes through  $(-2, 2)$ . Give the coordinates of three other points on the circle.



8. Use a compass, protractor, and straightedge to draw circle  $O$  with diameter  $\overline{AB}$ ; radius  $\overline{OC}$  with  $\overline{OC} \perp \overline{AB}$ ;  $\overline{OD}$ , the angle bisector of  $\angle AOC$ , with  $D$  on the circle; chords  $\overline{AC}$  and  $\overline{BC}$ ; and a tangent at  $D$ .

9. Use a compass to construct a circle. Label the center  $P$ . Sketch two parallel tangents. Connect the points of tangency. What do you notice about the chord?

10. Use your compass and protractor to make an arc with measure  $50^\circ$ , an arc with measure  $180^\circ$ , and an arc with measure  $290^\circ$ . Label each arc with its measure.

11. Use your compass to construct two circles with different radii that intersect in two points. Label the centers  $P$  and  $Q$  and the points of intersection  $A$  and  $B$ . Construct quadrilateral  $PAQB$ . What type of quadrilateral is it?