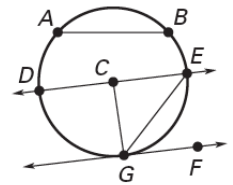


In the area below, using a compass and a ruler draw (do not sketch) enlarged version of the picture on the right with the radius 2 in.



In Exercises 1-8, tell whether the line or segment is best described as a chord, a secant, a tangent, a diameter, or a radius of $\odot C$.



1. \overline{AB} _____

2. \overleftrightarrow{DE} _____

3. \overline{DC} _____

4. \overline{DE} _____

5. \overleftrightarrow{FG} _____

6. \overline{CG} _____

7. \overline{EG} _____

8. \overline{EC} _____

9. Identify two semicircles: _____ & _____

10. Identify 5 minor arcs: _____, _____, _____, _____, _____

11. Identify 3 major arcs: _____, _____, _____

Arcs have a degree measure, just as angles do. A full circle has an arc measure of 360° , a semicircle has an arc measure of 180° , and so on. The arc measure of a minor arc is the same as the measure of the central angle, the angle with its vertex at the center of the circle, and sides passing through the endpoints of the arc. The measure of a major arc is the same as the reflex measure of the central angle.

12. Use your compass and protractor to make an arc with measure 65° . Now make an arc with measure 215° . Label each arc with its measure.

13. Sketch circle P . Sketch a triangle inside circle P so that the three sides of the triangle are chords of the circle. This triangle is "inscribed" in the circle. Sketch another circle and label it Q . Sketch a triangle in the exterior of circle Q so that the three sides of the triangle are tangents of the circle. This triangle is "circumscribed" about the circle.

14. Use your compass to construct two circles with the same radius intersecting at two points. Label the centers P and Q . Label the points of intersection of the two circles A and B . Construct quadrilateral $PAQB$. What type of quadrilateral is it?

For Exercises 15-19, sketch, label, and mark the figure or write "not possible" and explain why.

15. Obtuse scalene triangle FAT with $m \angle FAT = 100^\circ$

16. Trapezoid $TRAP$ with $\angle TAP$ and $\angle TRA$ a right angle

17. Two different (noncongruent) quadrilaterals with angles of 60° , 60° , 120° , and 120°

18. Equilateral right triangle

19. Right isosceles triangle RGT with $RT = GT$ and $m \angle RTG = 90^\circ$