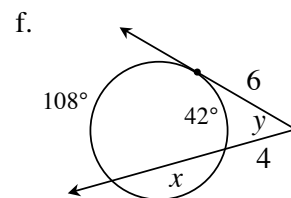
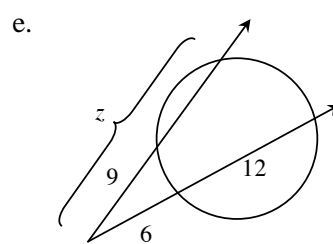
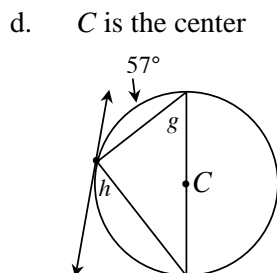
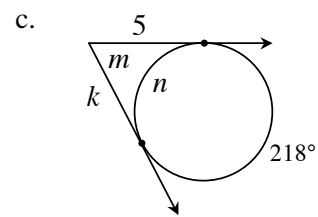
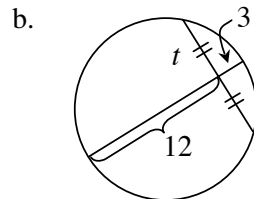
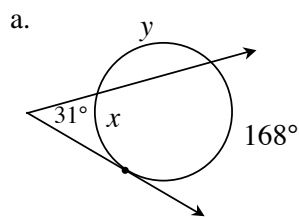


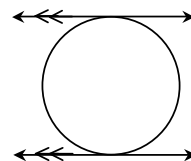
- 11-95. Use all your circle relationships to solve for the variables in each of the diagrams below.



METHODS AND MEANINGS

Intersecting Tangents

Two lines that are tangent to the same circle may not intersect. When this happens, the tangent lines are parallel, as shown in the diagram at right. The arcs formed by the points of tangency are both 180° .



However, when the lines of tangency intersect outside the circle, some interesting relationships are formed. For example, the lengths m and n from the point of intersection to the points of tangency are equal.

The angle and arcs are related to the angle outside the circle as well. If x is the measure of the angle formed by the intersection of the tangents, a represents the measure of the minor arc, and b represents the measure of the major arc, then:

$$a = 180^\circ - x \quad \text{and} \quad b = 180^\circ + x$$

