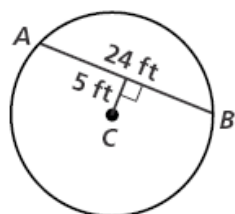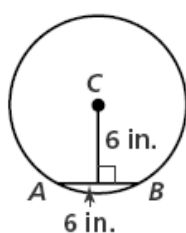**Name:** _____

Arcs and Chords
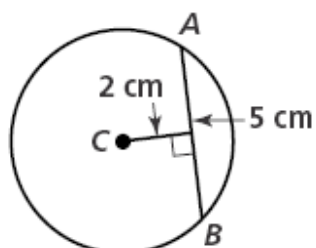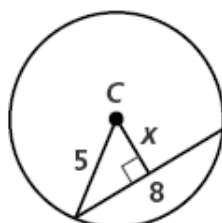
1) Find the radius

    1)

    2)

    3)
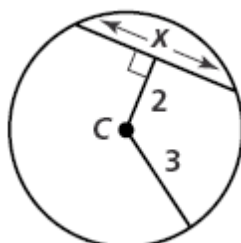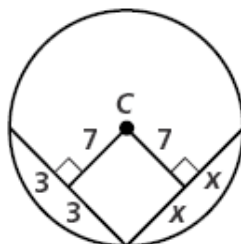

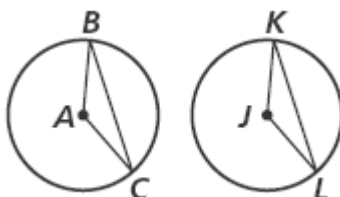2) Find the value of *x* to the nearest tenth.

    1)

    2)

    3)

3) List what you can conclude from each diagram.

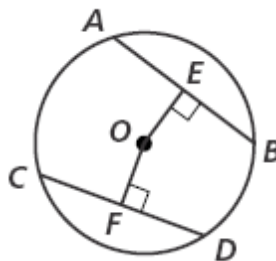   1) $\odot Q \cong \odot T, PR \cong SU$

   2) $\odot A \cong \odot J, \overline{BC} \cong \overline{KL}$

4) Write a two-column proof
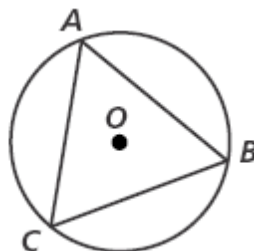   Given: $\odot O$, $\overline{OE} \perp \overline{AB}$ $\overline{OF} \perp \overline{CD}$ $AB = CD$
   Prove: $OE = OF$

5) Write a two-column proof
   Given: $\odot O$, $mAB = mBC = mCA$
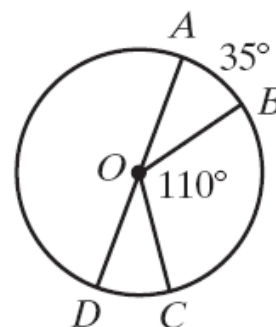   Prove: $m\angle ABC = m\angle BCA = m\angle CAB$

6) In circle O, $mAB = 35, m\angle BOC = 110,$ and $\overline{AOD}$ is a diameter.

   1) Find mBC and mCD

   2) Explain why AB=CD

7) In circle with center O, $mAB = 90°$ and OA=6

   1) Prove that $\triangle AOB$ is a right triangle

   2) Find AB

   3) Find OC, the apothem to $\overline{AB}$