

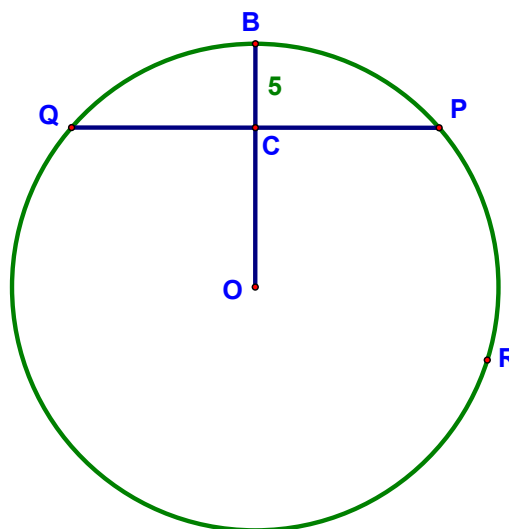


Congruent Chords - Lesson 10-2

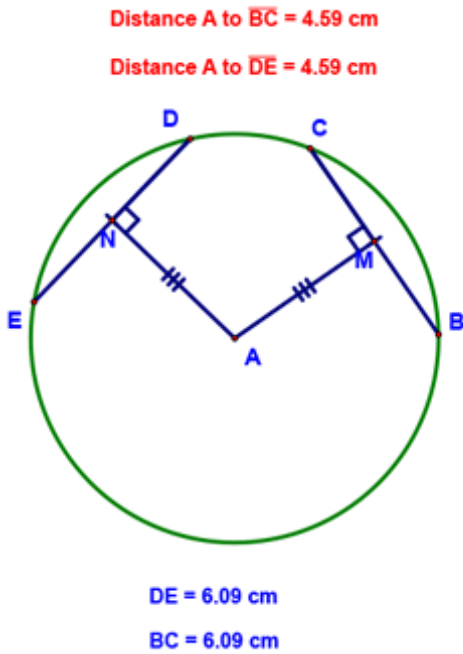
Here's the warmup:

Given: $\odot O$
 $\overline{BO} \perp \overline{PQ}$
 $BC = 5$
 $PQ = 30$

Find: The radius of $\odot O$



Today, we're going to discuss a couple of theorems related to congruent chords:



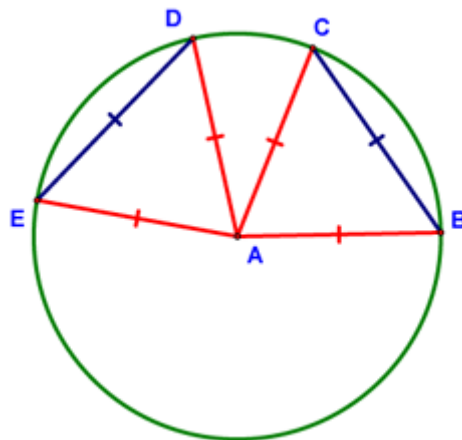
Theorem 76

If two chords of a circle are equidistant from the center, then they are congruent.

Theorem 77

If two chords of a circle are congruent, then they are equidistant from the center of the circle.

The proof for these theorems should be fairly straight forward given the following hint. You should see if you can do this!!



Here's an example problem using one of these theorems:

Given: $\odot O$
 $\overline{AB} \cong \overline{CD}$
 $OP = 12x - 5$
 $OQ = 4x + 19$

Find: OP

