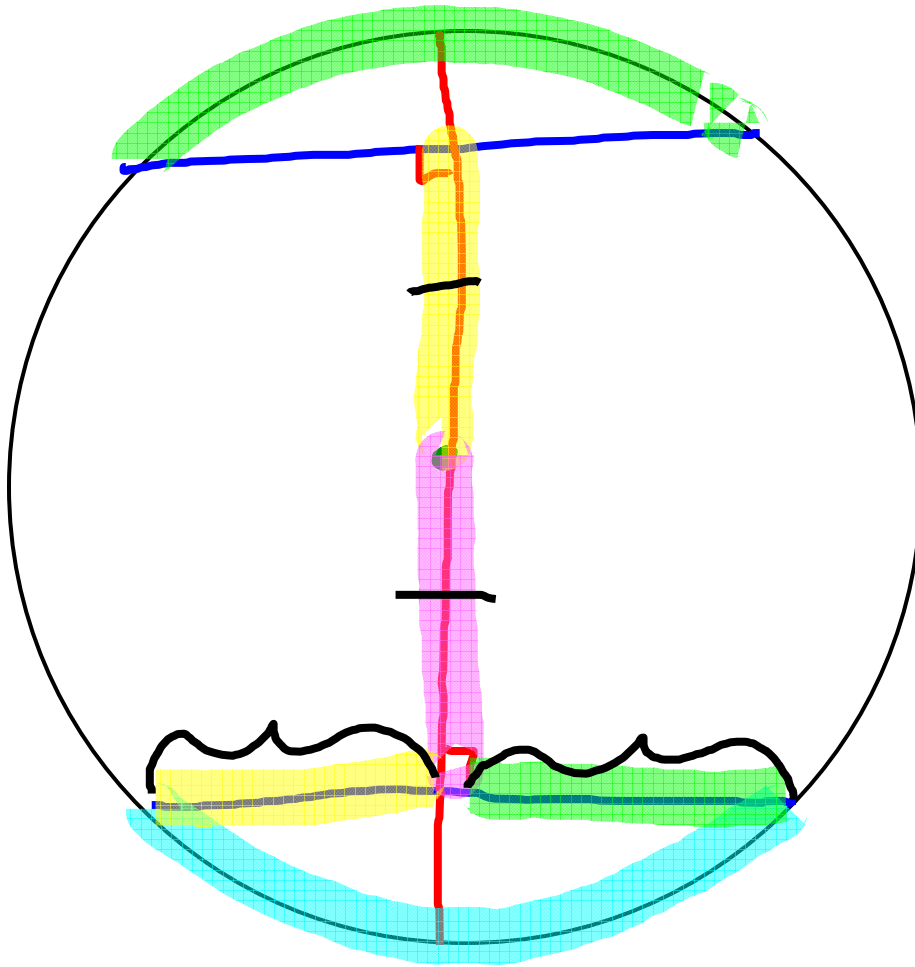


Notes for Lesson 9-4: Arcs and Chords

Complete the following steps using the given circle



Step 1: Find the center of the circle

Step 2: draw two congruent horizontal chords at the top and bottom

Step 3: draw in a diameter that is perpendicular to the two chords

What can deduce about the lengths of the arcs made by the two chords?

\cong chords make \cong arcs

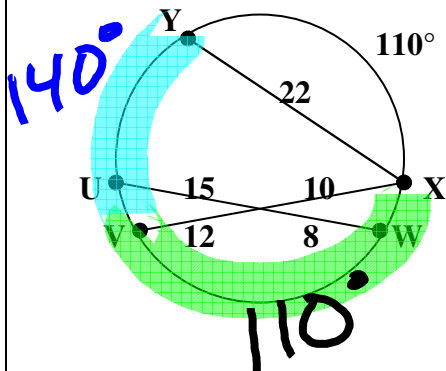
What can you deduce about the distance along the diameter between the center and the chords?

\cong chords are same distance from center of circle

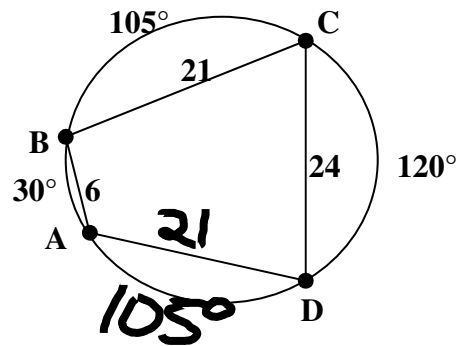
What can you deduce about the length from the diameter to each end of the chord?

they are \cong (chord is bisected by diameter)

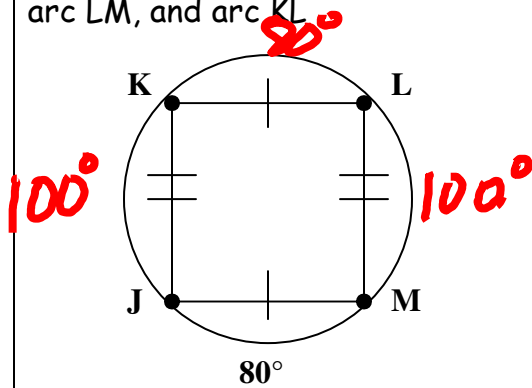
Ex 1: find the measures of arc VWX and arc VUY



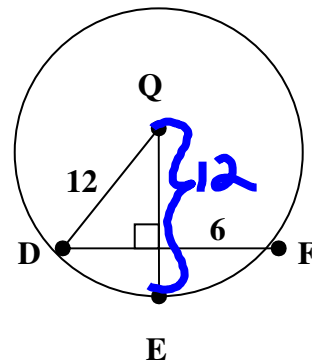
Ex 2: find the length of AD



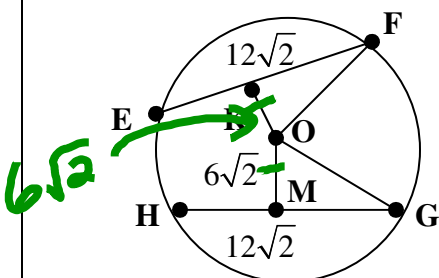
Ex 3: find the measures of arc JK, arc LM, and arc KL



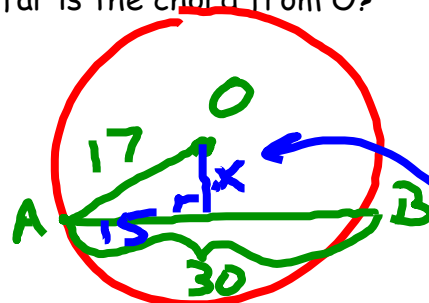
Ex 4: find the length of QE



Ex 5: find the length of OK



Ex 6: Sketch a circle O with radius 17 and chord AB of length 30. How far is the chord from O?



$$\begin{aligned}
 x^2 + 15^2 &= 17^2 \\
 x^2 + 225 &= 289 \\
 x^2 &= 64 \\
 x &= 8
 \end{aligned}$$