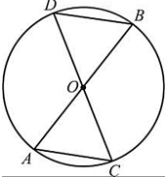
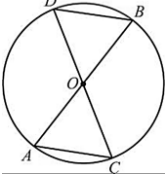
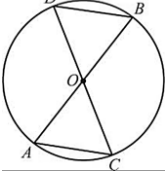
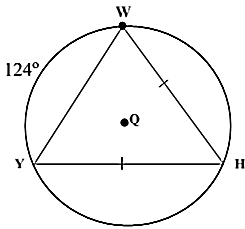


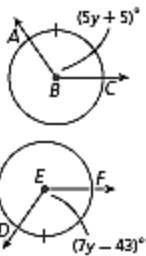
**Day 1 - Chord Properties and Segment Lengths**

Name	Theorem	Hypothesis	Conclusion
<p><b>Congruent Angle- Congruent Chord Theorem</b></p>	<p>Congruent central angles have congruent chords.</p>		
<p><b>Congruent Chord- Congruent Arc Theorem</b></p>	<p>Congruent chords have congruent arcs.</p>		
<p><b>Congruent Arc- Congruent Angle Theorem</b></p>	<p>Congruent arcs have congruent central angles.</p>		

**Example:** Find the measure of arc HY and HYW.

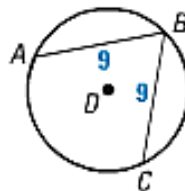


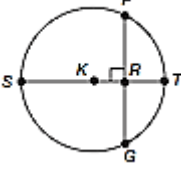
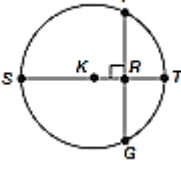
**Example:** Find the measure of angle DEF.



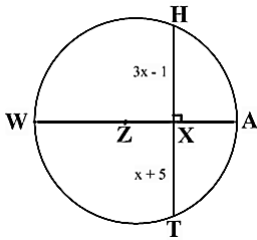
**Example:** Answer the following:

- If  $m\widehat{AB} = 110^\circ$ , find  $m\widehat{BC}$ .
- If  $m\widehat{AC} = 150^\circ$ , find  $m\widehat{AB}$ .

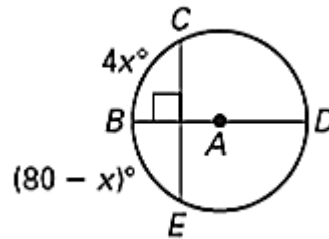


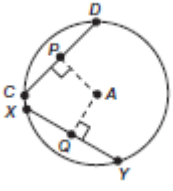
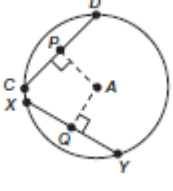
Name	Theorem	Hypothesis	Conclusion
<p><b>Diameter-Chord Theorem</b></p>	<p>If a radius or diameter is perpendicular to a chord, then it bisects the chord and its arc. <i>Sometimes, this creates a right triangle &amp; you'll use Pythagorean Theorem.</i></p>		
<p><b>Converse of Diameter-Chord Theorem</b></p>	<p>If a segment is the perpendicular bisector of a chord, then it is the radius or diameter.</p>		

**Example:** Find the measure of HT. Then find the measure of WA if you know  $XZ = 6$ .

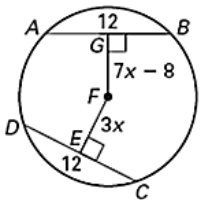


**Example:** Find the measures of arc CB, BE, and CE.

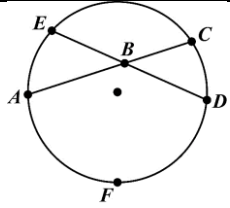


Name	Theorem	Hypothesis	Conclusion
<p><b>Equidistant Chord Theorem</b></p>	<p>If two chords are congruent, then they are equidistant from the center.</p>		
<p><b>Converse of Equidistant Chord Theorem</b></p>	<p>If two chords are equidistant from the center, then the chords are congruent.</p>		

**Example:** Find EF.

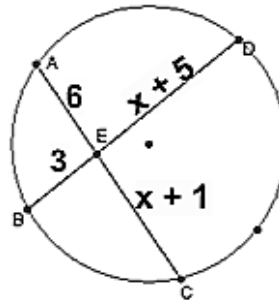
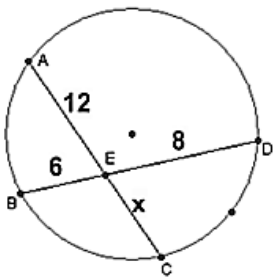


**Segment Lengths**

Name	Theorem	Hypothesis	Conclusion
<p><b>Segment Chord Theorem</b></p>	<p>If two chords in a circle intersect, then the product of the lengths of the segments of one chord is equal to the product of the lengths of the segments of the second chord.</p>		

**Example:** Find  $x$ .

**Example:** Find  $x$ .



**Example:** Find  $x$ .

**Example:** Find  $x$ .

