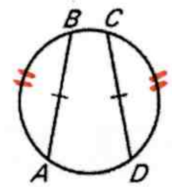
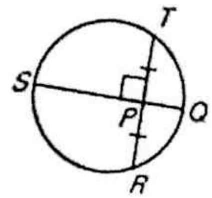
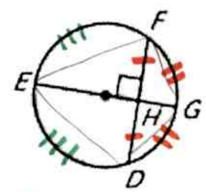
Section 10.3 Date ______

Apply Properties of Chords

Vocabulary	Definition	Example
same radius THEOREM 10.3	In the same circle, or in congruent circles, two minor arcs are congruent if and only if their corresponding chords are congruent.	$\overset{\frown}{AB} \cong \overset{\frown}{CD}$ if and only if $\overline{AB} \cong \overline{CD}$. 
THEOREM 10.4	If one chord is a perpendicular bisector of another chord, then the first chord is a diameter.	If $\overline{QS}$ is a perpendicular bisector of $\overline{TR}$, then $\overline{QS}$ is a diameter of the circle. Does not mean P is the center 
THEOREM 10.5	If a diameter of a circle is perpendicular to a chord, then the diameter bisects the chord ~~at~~ and its arc.	If $\overline{EG}$ is a diameter and $\overline{EG} \perp \overline{DF}$, then $\overline{HD} \cong \overline{HF}$ and $\overset{\frown}{GD} \cong \overset{\frown}{GF}$.  $\overset{\frown}{EF} \cong \overset{\frown}{DE}$
THEOREM 10.6	In the same circle, or in congruent circles, two chords are congruent if and only if they are equidistant from the center.	$\overline{AB} \cong \overline{CD}$ if and only if $FE = GE$.