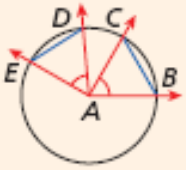
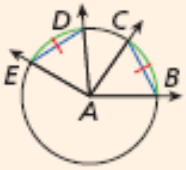
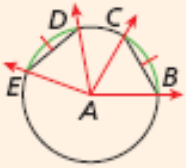
Name _____ Date _____ Class_____

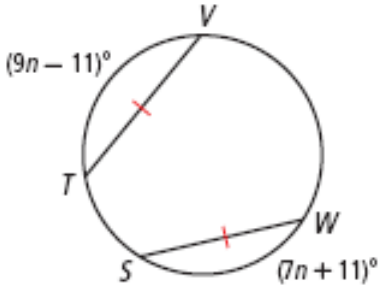
Geometry Notes Section 12-2 (see workbook pages 499-501)

Arcs and Chords

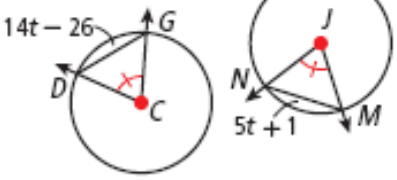
Congruent circles are circles that have equal radii.

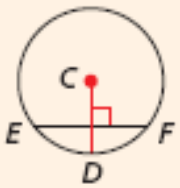
THEOREM	HYPOTHESIS	CONCLUSION
In a circle or congruent circles:		
(1) Congruent central angles have congruent chords.	 $\angle EAD \cong \angle BAC$	$\overline{DE} \cong \overline{BC}$
(2) Congruent chords have congruent arcs.	 $\overline{ED} \cong \overline{BC}$	$\overset{\frown}{DE} \cong \overset{\frown}{BC}$
(3) Congruent arcs have congruent central angles.	 $\overset{\frown}{ED} \cong \overset{\frown}{BC}$	$\angle DAE \cong \angle BAC$

1. $\overline{TV} \cong \overline{WS}$. Find m $\overset{\frown}{WS}$.

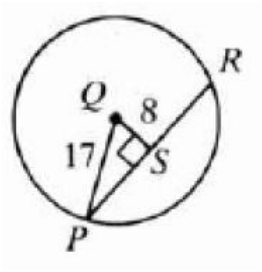


2. $\odot C \cong \odot J$, and $m\angle GCD \cong m\angle NJM$. Find NM.

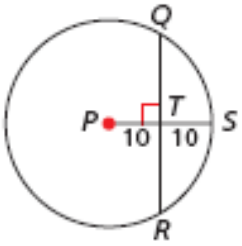


THEOREM	HYPOTHESIS	CONCLUSION
In a circle, if a radius (or diameter) is perpendicular to a chord, then it bisects the chord and its arc.	 $\overline{CD} \perp \overline{EF}$	$\overline{CD}$ bisects $\overline{EF}$ and $\overset{\frown}{EF}$.

3. Find *PR*.



4. Find *QR* to the nearest tenth.



5. If $m\overset{\frown}{GMJ} = 200$, find $m\overset{\frown}{GK}$.