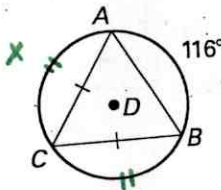


LESSON 10.3 Practice
For use with pages 664-670

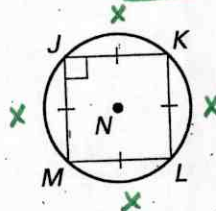
Find the measure of the given arc or chord.

1. $m\widehat{BC} = 122^\circ$



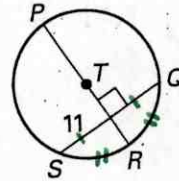
$2x + 116 = 360$
 $2x = 244$
 $x = 122$

2. $m\widehat{LM} = 90^\circ$

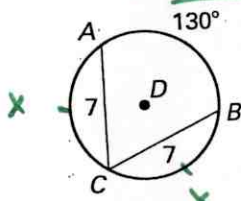


$4x = 360$
 $x = 90$

3. $\overline{QS} = 2(11) = 22$

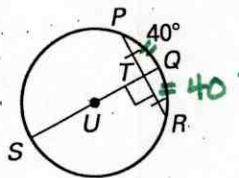


4. $m\widehat{AC} = 115^\circ$

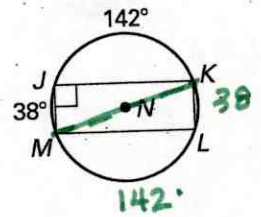


$2x + 130 = 360$
 $2x = 230$
 $x = 115$

5. $m\widehat{PQR} = 80^\circ$

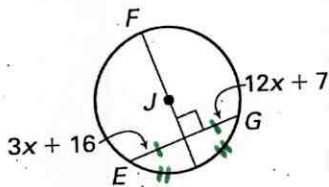


6. $m\widehat{KLM} = 180^\circ$



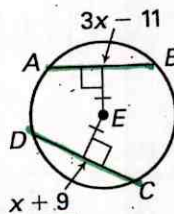
Find the value of x.

7.



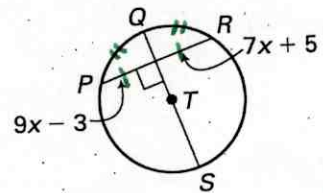
$3x + 16 = 12x + 7$
 $16 = 9x + 7$
 $9 = 9x$
 $x = 1$

8.



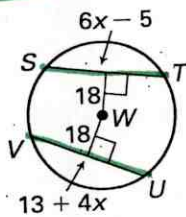
$AB \cong DC$
 $3x - 11 = x + 9$
 $2x - 11 = 9$
 $2x = 20$
 $x = 10$

9.



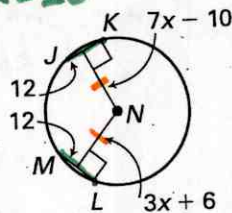
$9x - 3 = 7x + 5$
 $2x - 3 = 5$
 $2x = 8$
 $x = 4$

10.



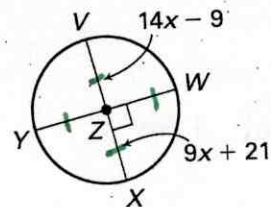
$\overline{ST} \cong \overline{UV}$
 $6x - 5 = 13 + 4x$
 $2x - 5 = 13$
 $2x = 18$
 $x = 9$

11.



$\overline{KN} \cong \overline{LN}$
 $7x - 10 = 3x + 6$
 $4x = 16$
 $x = 4$

12.



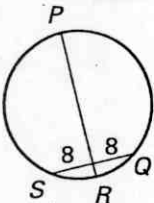
$\overline{VZ} \cong \overline{ZX}$
 $14x - 9 = 9x + 21$
 $5x - 9 = 21$
 $5x = 30$
 $x = 6$

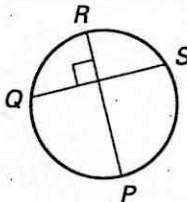
LESSON 10.3

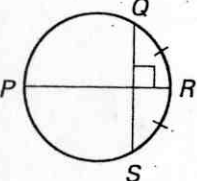
Practice *continued*
For use with pages 664-670

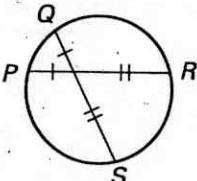
must be \perp to the chord and bisect the chord or arc (\perp bisector)

In Exercises 13-16, determine whether \overline{PR} is a diameter of the circle.

13.  **NO, not \perp**

14.  **NO, does not bisect \overline{QS}**

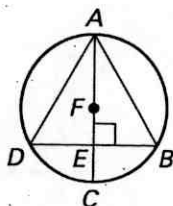
15.  **yes**

16.  **NO**

17. **Proof** Complete the proof.

GIVEN: \overline{AC} is a diameter of $\odot F$. $\overline{AC} \perp \overline{BD}$

PROVE: $\widehat{AD} \cong \widehat{AB}$



Statements

1. \overline{AC} is a diameter of $\odot F$. $\overline{AC} \perp \overline{BD}$

2. ? $\angle AED \cong \angle AEB$

3. $\overline{DE} \cong \overline{BE}$

4. $\overline{AE} \cong \overline{AE}$

5. $\triangle AED \cong \triangle AEB$

6. ? $\overline{AD} \cong \overline{AB}$

7. $\widehat{AD} \cong \widehat{AB}$

Reasons

1. ? **Given**

2. All right angles are congruent.

3. ? **Thm 10.5**

4. ? **Reflexive**

5. ? **SAS**

6. Corresponding parts of congruent triangles are congruent.

7. ? **Thm 10.3**