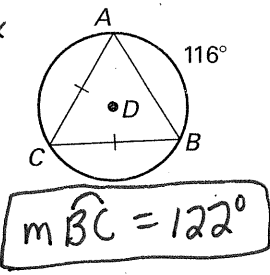


LESSON 10.3 Practice
For use with pages 664-670

Find the measure of the given arc or chord.

1. $m\widehat{BC}$

$$\begin{array}{r} 360 = 116 + 2x \\ -116 \quad -116 \\ \hline 244 = 2x \\ \frac{244}{2} = \frac{2x}{2} \\ 122 = x \end{array}$$

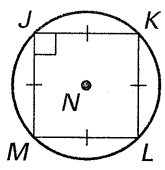


$m\widehat{BC} = 122^\circ$

2. $m\widehat{LM}$

$$\frac{360}{4} = 90^\circ$$

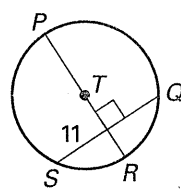
$m\widehat{LM} = 90^\circ$



3. \overline{QS}

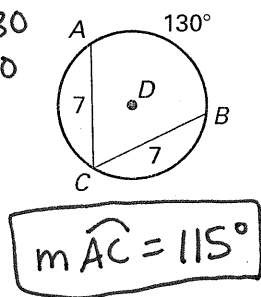
$$\overline{QS} = 2(11)$$

$m\overline{QS} = 22$



4. $m\widehat{AC}$

$$\begin{array}{r} 360 = 2x + 130 \\ 130 \quad -130 \\ \hline 230 = 2x \\ \frac{230}{2} = \frac{2x}{2} \\ 115 = x \end{array}$$

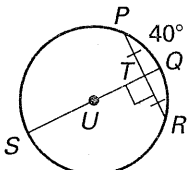


$m\widehat{AC} = 115^\circ$

5. $m\widehat{PQR}$

$$m\widehat{PQR} = 2(40^\circ)$$

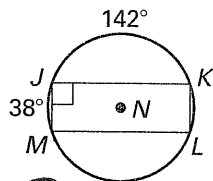
$m\widehat{PQR} = 80^\circ$



6. $m\widehat{KLM}$

$$m\widehat{KLM} = 142 + 38$$

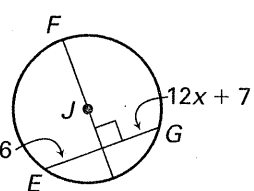
$m\widehat{KLM} = 180^\circ$



Find the value of x.

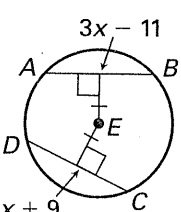
7.

$$\begin{array}{r} 3x + 16 = 12x + 7 \\ -3x \quad -7 \quad -3x \quad -7 \\ \hline 9 = 9x \\ \frac{9}{9} = \frac{9x}{9} \\ 1 = x \end{array}$$



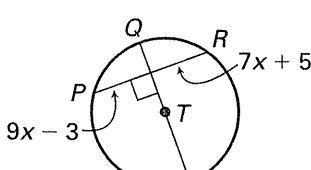
8.

$$\begin{array}{r} 3x - 11 = x + 9 \\ -x \quad +1 \quad -x \quad +11 \\ \hline 2x = 20 \\ \frac{2x}{2} = \frac{20}{2} \\ x = 10 \end{array}$$



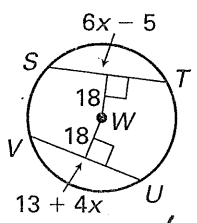
9.

$$\begin{array}{r} 9x - 3 = 7x + 5 \\ -7x \quad +3 \quad -7x \quad +3 \\ \hline 2x = 8 \\ \frac{2x}{2} = \frac{8}{2} \\ x = 4 \end{array}$$



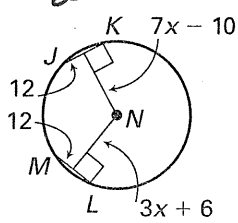
10.

$$\begin{array}{r} 6x - 5 = 13 + 4x \\ -4x \quad +5 \quad -4x \quad +5 \\ \hline 2x = 18 \\ \frac{2x}{2} = \frac{18}{2} \\ x = 9 \end{array}$$



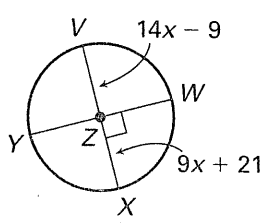
11.

$$\begin{array}{r} 7x - 10 = 3x + 6 \\ -3x \quad +10 \quad -3x \quad +10 \\ \hline 4x = 16 \\ \frac{4x}{4} = \frac{16}{4} \\ x = 4 \end{array}$$



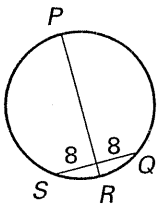
12.

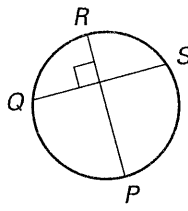
$$\begin{array}{r} 14x - 9 = 9x + 21 \\ -9x \quad +9 \quad -9x \quad +9 \\ \hline 5x = 30 \\ \frac{5x}{5} = \frac{30}{5} \\ x = 6 \end{array}$$

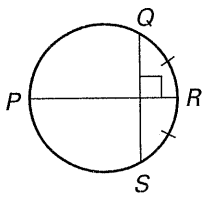


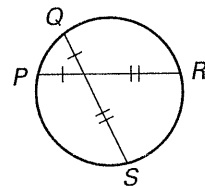
LESSON 10.3 Practice *continued*
For use with pages 664–670

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

13.  *No*
Not \perp

14.  *No*
doesn't bisect
not given that RP is diameter

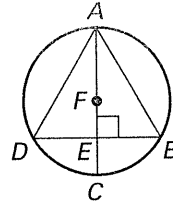
15.  *PR is a diameter*

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

Reasons

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

1. ?

2. ?

2. All right angles are congruent.

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

3. ?

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

4. ?

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

5. ?

6. ?

6. Corresponding parts of congruent triangles are congruent.

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

7. ?