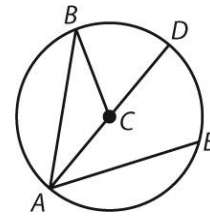


15.1

Name: _____

Show all work for credit. Correct work from the answers on the website.

Refer to the figure for Problems 1–3. C is the center of the circle.



1. Name the chord(s). _____

2. Name the central angle(s). _____

3. Name the inscribed angle(s). _____

For each figure, determine the indicated measures. Explain your reasoning.

4. $m\widehat{QS} =$ _____
 because _____
 $m\widehat{RQT} =$ _____
 because _____

5. $m\widehat{HG} =$ _____
 because _____
 $m\widehat{FEH} =$ _____
 because _____

6. $m\angle CED =$ _____
 because _____
 $m\widehat{DEA} =$ _____
 because _____

7. $m\angle FGI =$ _____
 because _____
 $m\widehat{GH} =$ _____
 because _____

Find the unknown value. Show all work.

8. $x =$ _____

9. $a =$ _____

15.2

Each quadrilateral described is inscribed in a circle. Determine the angle measures.

1. ABCD has $m\angle A = 53^\circ$ and $m\angle B = 82^\circ$.

2 RSTU has $m\angle S = 104^\circ$ and $m\angle T = 55^\circ$.

$m\angle C =$ _____ $m\angle D =$ _____ $m\angle R =$ _____ $m\angle U =$ _____

Determine whether each quadrilateral can be inscribed in a circle. If it cannot be determined, say so.

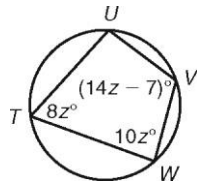
3. _____

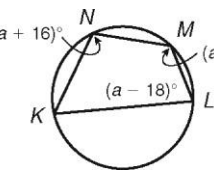
4. _____

For each inscribed quadrilateral, determine the angle measures. Show all work.

5. $m\angle X =$ _____
 $m\angle Y =$ _____
 $m\angle Z =$ _____
 $m\angle W =$ _____

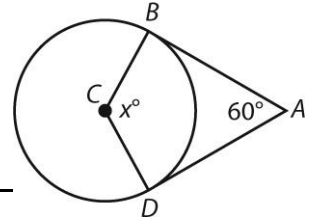
6. $m\angle C =$ _____
 $m\angle D =$ _____
 $m\angle E =$ _____
 $m\angle F =$ _____

7.  $m\angle T =$ _____
 $m\angle U =$ _____
 $m\angle V =$ _____
 $m\angle W =$ _____

8.  $m\angle K =$ _____
 $m\angle L =$ _____
 $m\angle M =$ _____
 $m\angle N =$ _____

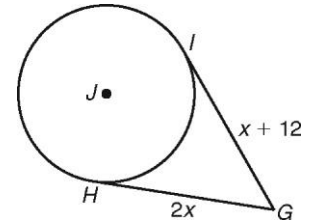
15.3

Refer to the figure for Problems 1–3. \overline{AB} is tangent to $\odot C$ at point B and \overline{AD} is tangent to $\odot C$ at point D . Answer the questions to determine the measure of $\angle BCD$.



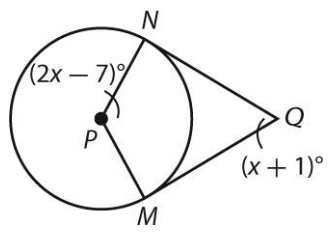
- How are $\angle BAD$ and $\angle BCD$ related? _____
- Write an equation to solve for x . _____
- Solve the equation. What is $m\angle BCD$? _____

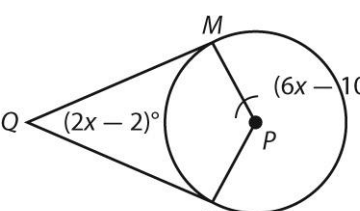
Refer to the figure for Problems 4–7. \overline{GH} is tangent to $\odot J$ at point H and \overline{GI} is tangent to $\odot J$ at point I . Answer the questions to determine the length of \overline{GH} .



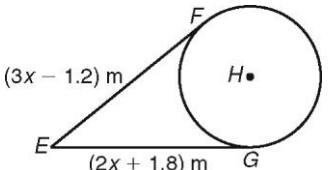
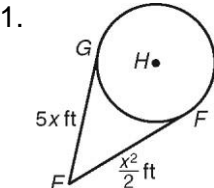
- How are \overline{GH} and \overline{GI} related? _____
- Write an equation to solve for x . _____
- Solve the equation. What is the value of x ? _____ 7. What is GH ? _____

In Problems 8 and 9, \overline{QM} is tangent to $\odot P$ at point M and \overline{QN} is tangent to $\odot P$ at point N . Solve for the variable and determine the angle measures. Show all work.

8.  $x =$ _____ $m\angle NQM =$ _____
 $m\angle PNQ =$ _____ $m\angle NPM =$ _____

9.  $x =$ _____ $m\angle MQN =$ _____
 $m\angle QMP =$ _____ $m\angle NPM =$ _____

In Problems 10 and 11, \overline{EF} is tangent to $\odot H$ at point F and \overline{EG} is tangent to $\odot H$ at point G . Determine the length of \overline{EF} . Show all work.

10.  $EF =$ _____ 11.  $EF =$ _____