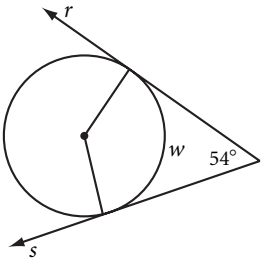
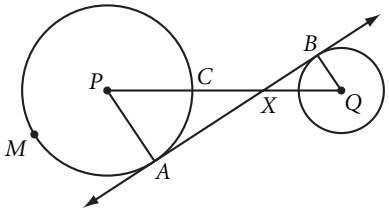
Lesson 6.1 • Tangent Properties

Name _____ Period _____ Date _____

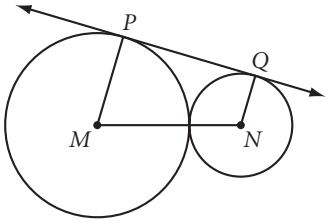
1. Rays r and s are tangents. $w =$ _____



2. $\overleftrightarrow{AB}$ is tangent to both circles and $m\overset{\frown}{AMC} = 295°$. $m\angle BQX =$ _____



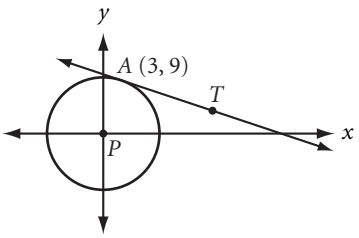
3. $\overleftrightarrow{PQ}$ is tangent to two externally tangent noncongruent circles, M and N.



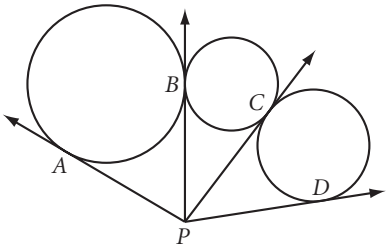
a. $m\angle NQP =$ _____, $m\angle MPQ =$ _____

b. What kind of quadrilateral is $MNQP$? Explain your reasoning.

4. $\overleftrightarrow{AT}$ is tangent to circle P. Find the equation of $\overleftrightarrow{AT}$.



5. $\overrightarrow{PA}$, $\overrightarrow{PB}$, $\overrightarrow{PC}$, and $\overrightarrow{PD}$ are tangents. Explain why $\overline{PA} \cong \overline{PD}$.



6. Circle A has diameter 16.4 cm. Circle B has diameter 6.7 cm.

a. If A and B are internally tangent, what is the distance between their centers?

b. If A and B are externally tangent, what is the distance between their centers?

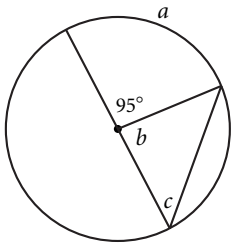
7. Construct a circle, P. Pick a point, A, on the circle. Construct a tangent through A. Pick a point, T, on the tangent. Construct a second tangent to the circle through T.

Lesson 6.2 • Chord Properties

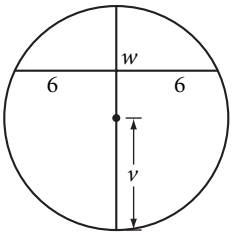
Name _____ **Period** _____ **Date** _____

In Exercises 1–6, find each unknown or write "cannot be determined."

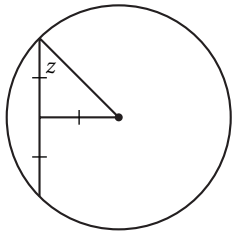
1. a = _____, b = _____, c = _____



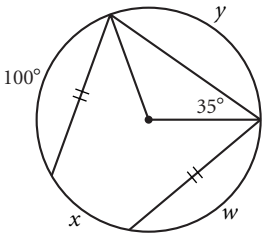
2. w = _____, v = _____



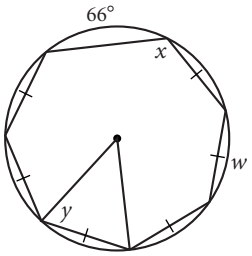
3. z = _____



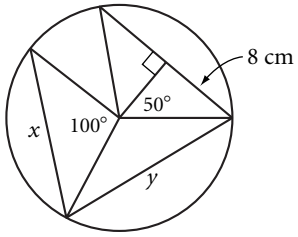
4. w = _____, x = _____, y = _____



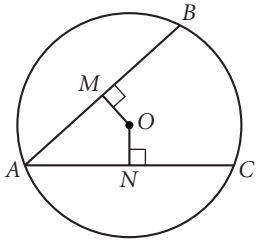
5. w = _____, x = _____, y = _____



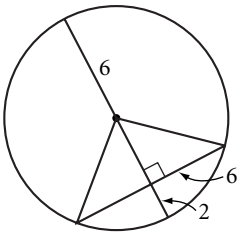
6. x = _____, y = _____



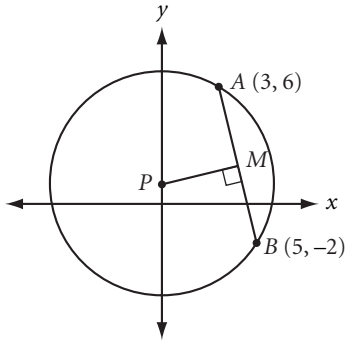
7. $\overline{AB} \cong \overline{AC}$. $AMON$ is a _____. Justify your answer.



8. What's wrong with this picture?



9. Find the coordinates of P and M.

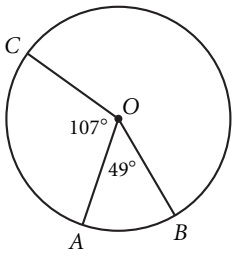


10. $m\widehat{AB}$ = _____

$m\widehat{ABC}$ = _____

$m\widehat{BAC}$ = _____

$m\widehat{ACB}$ = _____



11. Trace part of a circle onto patty paper. Fold to find the center. Explain your method.