Name Key Date _____ Pd _____

10.1 Tangents, Secants and Angle Measures CYU

☑ *Use when you get it right all by yourself*

S *Use when you did it all by yourself, but made a silly mistake*

H *Use when you could do it alone with a little help from teacher or peer*

G *Use when you completed the problem in a group*

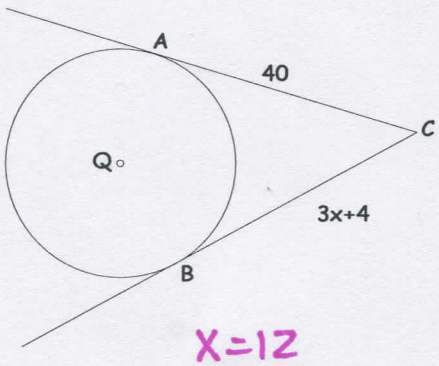
X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Tangent Line to a Circle Theorem		2, 5	4
External Tangent Congruence Theorem	1	3	4
Circle Vocabulary Terms	7 - 13		6
Real World Application			14, 15

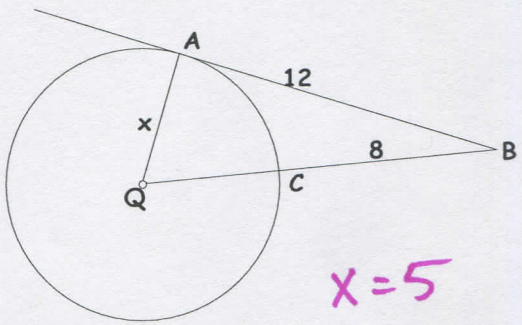
For each ⊙Q, find the value of x. Assume that segments that appear to be tangent are tangent.

1.



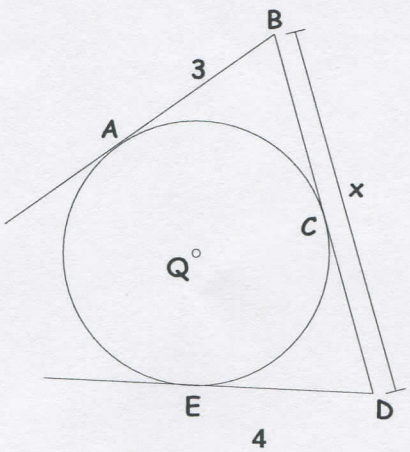
X=12

2.



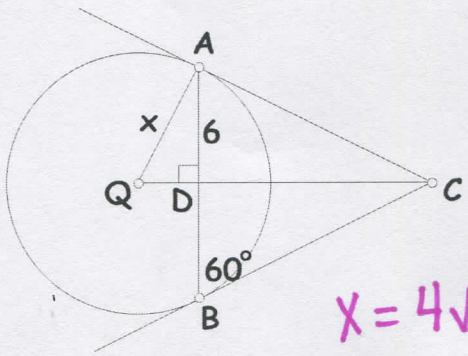
X=5

3.



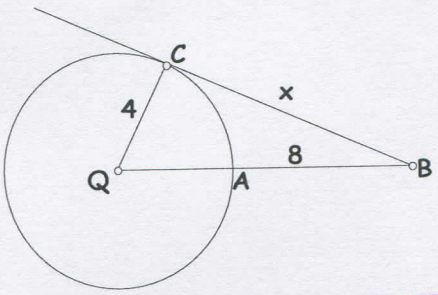
X=7

4.



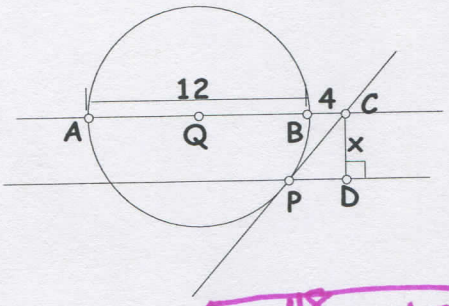
X=4√3

5.



$x = 8\sqrt{2} \approx 11.314$

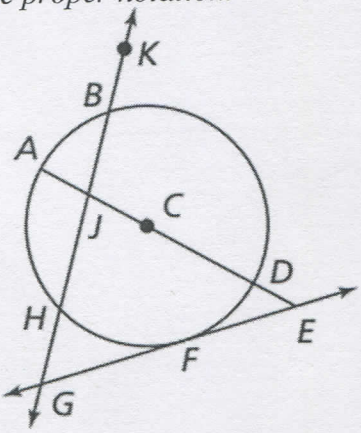
6.



$x = \frac{48}{10} \approx 4.8$

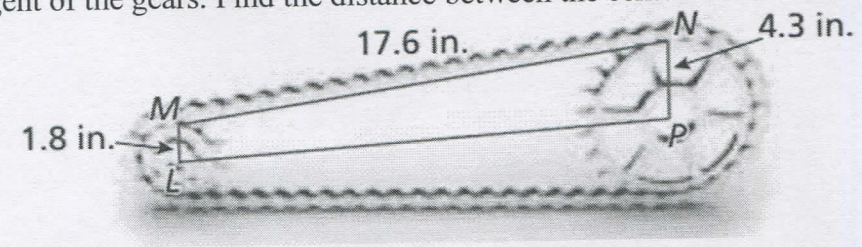
Name the following terms based on the provided diagram. Use proper notation.

7. circle $\odot C$
8. two radii $\overline{AC}, \overline{DC}$
9. two chords $\overline{BH}, \overline{AD}$
10. a diameter $\overline{AD}$
11. secant $\overleftrightarrow{KG}$
12. tangent $\overleftrightarrow{GE}$
13. point of tangency F



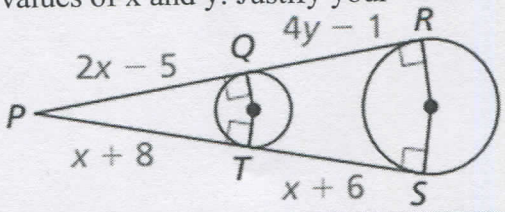
14. **MODELING WITH MATHEMATICS** A bicycle chain is pulled tightly so that $\overline{MN}$ is a common tangent of the gears. Find the distance between the centers of the gears.

≈ 17.78 in



15. **MATHEMATICAL CONNECTIONS** Find the values of x and y. Justify your answer.

$x = 13$ $y = 5$



CYU Reflection: *How far can you go: basic, intermediate, or advanced?*

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.