

Name: _____

AK

Period: _____

10.1 Practice Problems

1. Name the circle.

Circle C

2. Name two radii

\overline{AC} , \overline{CD}

3. Name two chords.

\overline{BH} \overline{AD}

4. Name a diameter.

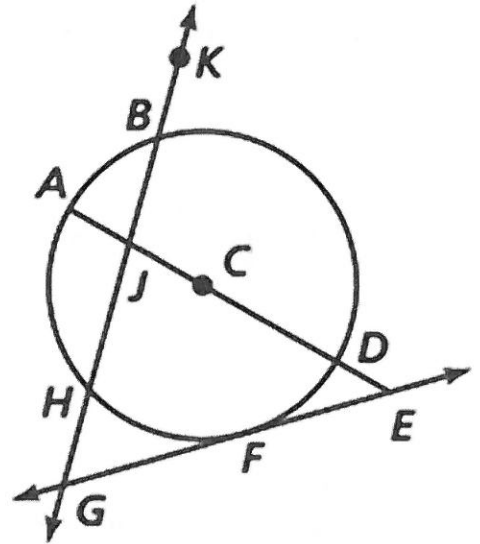
\overline{AD}

5. Name a secant.

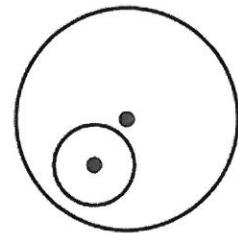
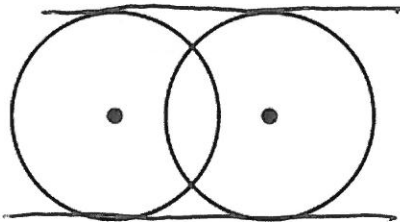
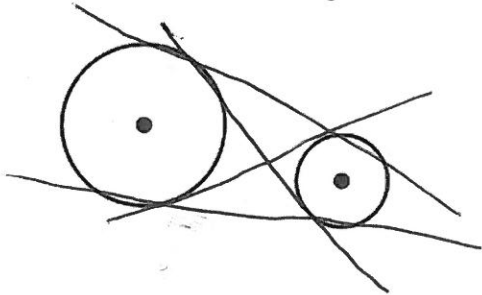
\overleftrightarrow{BH}

6. Name a tangent and a point of tangency.

\overleftrightarrow{GE} , F



7. Find all common tangents.



None.

8. Is segment AB tangent to circle C?

a) Yes since $3^2 + 4^2 = 5^2$

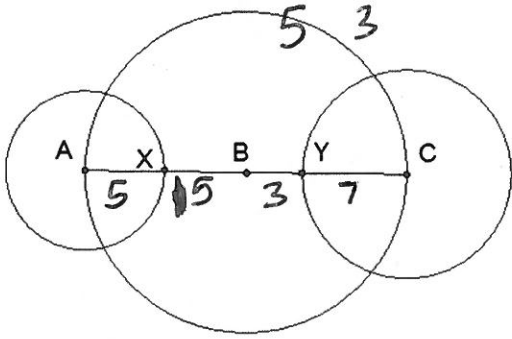
b) Yes since $12^2 + 16^2 = 20^2$

9. Find the length of each radius.

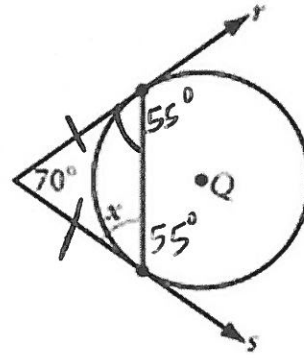
a) $r^2 + 24^2 = (r + 16)^2$
 $r^2 + 24^2 = r^2 + 32r + 256$
 -256
 $320 = 32r \rightarrow r = 10$

b) $r^2 + 14^2 = (7 + r)^2$
 $r^2 + 196 = 49 + 14r + r^2$
 $\frac{147}{14} = \frac{14r}{14}$
 $10.5 = r$

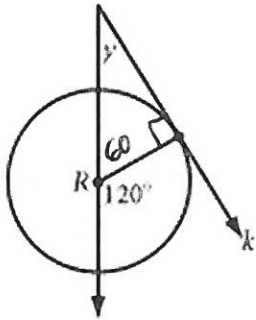
10. The diameter of circle A is 10, circle B is 20 and circle C is 14 inches. Find XB, BY



11. Rays r and s are tangent to circle Q . $x = ?$ $\textcircled{h} 55^\circ$



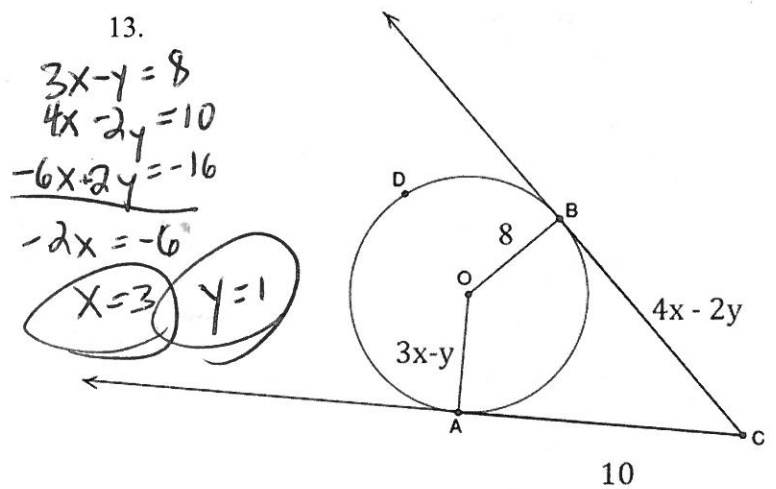
12. Ray k is tangent to circle R . $y = ? 30^\circ$



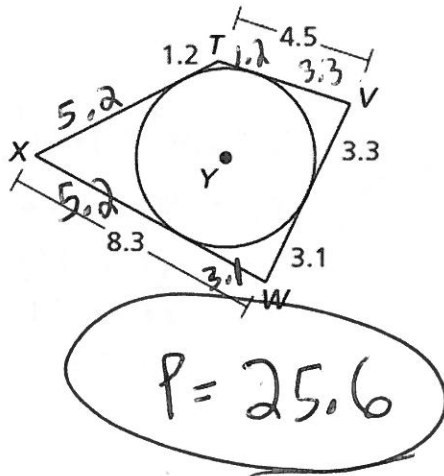
13.

$$\begin{aligned} 3x - y &= 8 \\ 4x - 2y &= 10 \\ \hline -6x + 2y &= -16 \\ -2x &= -6 \\ \hline x &= 3 \end{aligned}$$

$y = 1$



14. **USING STRUCTURE** Each side of quadrilateral $TVWX$ is tangent to $\odot Y$. Find the perimeter of the quadrilateral.



15. **PROOF** In the diagram, \overline{RS} is a common internal tangent to $\odot A$ and $\odot B$. Prove that $\frac{AC}{BC} = \frac{RC}{SC}$.

