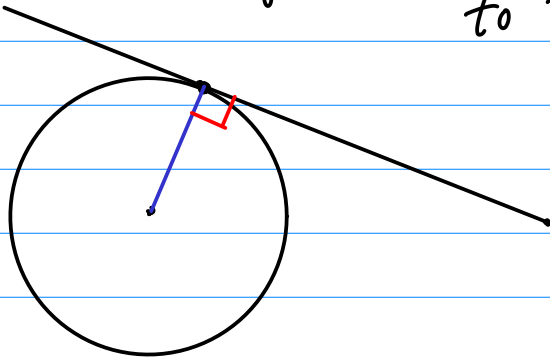
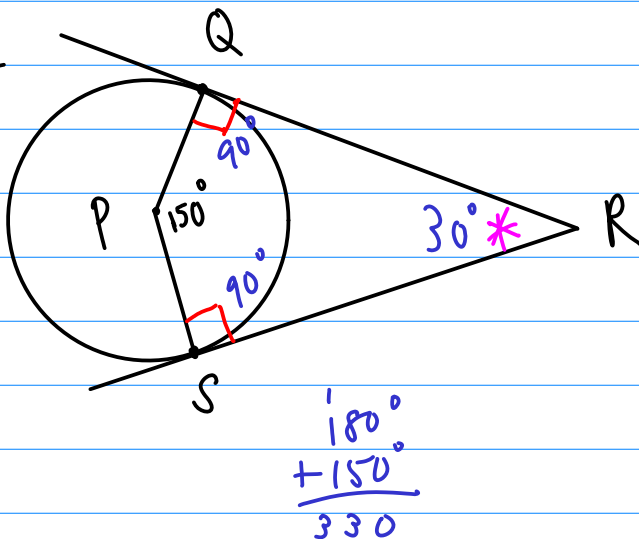


§6.1: Properties of Tangents

* Tangent Conjecture: a tangent is \perp to the radius drawn to it.



Ex:



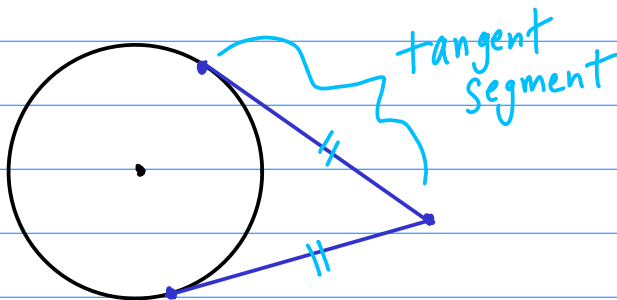
Given: $m\angle P = 150^\circ$

\overline{RQ} is tangent to $\odot P$ @ Q
 \overline{RS} " " @ S

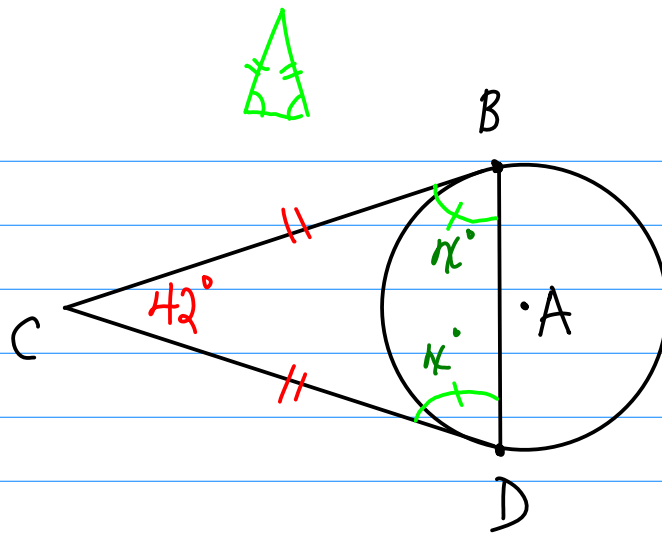
Find $m\angle QRS$

\uparrow
 30°

* Tangent Segments Conjecture: Tangent segments to a \odot from a pt. outside the \odot are \cong .



Ex:



Given:

B & D are pts. of tangency
 $m\angle C = 42^\circ$

Find $m\angle CBD$

$m\angle CBD = 69^\circ$

$$42^\circ + x^\circ + x^\circ = 180^\circ$$

$$\begin{array}{r} 42 + 2x = 180 \\ -42 \qquad -42 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{138}{2}$$

$$x = 69$$