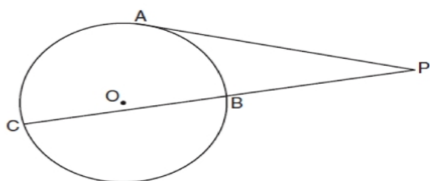


**Geometry Regents Bimodal Worksheets**

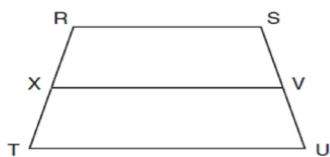
- 1 A polygon is transformed according to the rule:  $(x,y) \rightarrow (x+2,y)$ . Every point of the polygon moves two units in which direction?

- 2 In the diagram below, tangent  $\overline{PA}$  and secant  $\overline{PBC}$  are drawn to circle  $O$  from external point  $P$ .



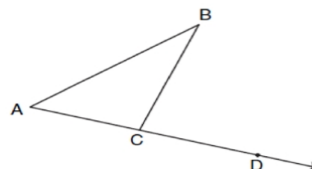
If  $PB = 4$  and  $BC = 5$ , what is the length of  $\overline{PA}$ ?

- 3 In the diagram below of trapezoid  $RSUT$ ,  $\overline{RS} \parallel \overline{TU}$ ,  $X$  is the midpoint of  $\overline{RT}$ , and  $V$  is the midpoint of  $\overline{SU}$ .



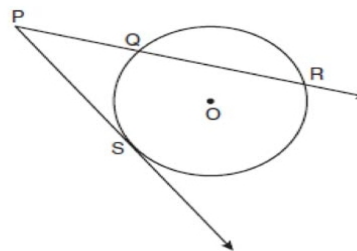
If  $RS = 30$  and  $XV = 44$ , what is the length of  $\overline{TU}$ ?

- 4 In the diagram below,  $\triangle ABC$  is shown with  $\overline{AC}$  extended through point  $D$ .



If  $m\angle BCD = 6x + 2$ ,  $m\angle BAC = 3x + 15$ , and  $m\angle ABC = 2x - 1$ , what is the value of  $x$ ?

- 5 In the diagram below,  $\overline{PS}$  is a tangent to circle  $O$  at point  $S$ ,  $\overline{PQR}$  is a secant,  $PS = x$ ,  $PQ = 3$ , and  $PR = x + 18$ .



(Not drawn to scale)

What is the length of  $\overline{PS}$ ?