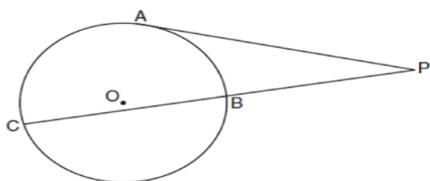**Geometry Regents Bimodal Worksheets**
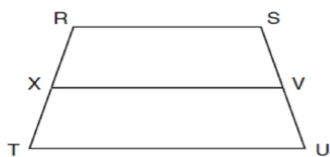
1 A polygon is transformed according to the rule:
$(x,y) \rightarrow (x+2,y)$. Every point of the polygon
moves two units in which direction?

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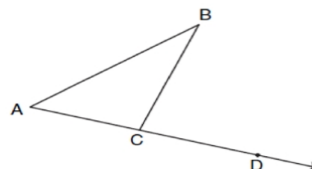are drawn to circle O from external point P.

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
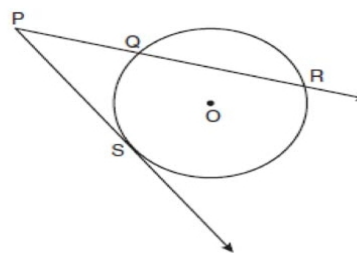$\overline{SU}$.

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 $\overline{PS}$?