$\qquad$

1) ORays $m$ and $n$ are tangent to circle
$P$.
$w=$ $\qquad$

2) Rays $r$ and $s$ are tangent to circle $Q$.
$x=$ $\qquad$

3) Ray $k$ is tangent to circle $R$.
$y=$ $\qquad$

4) Line $t$ is tangent to both circles.

$$
z=
$$


5) Quadrilateral POST is circumscribed about circle $Y . O R=13 \mathrm{in}$. and $S T=12 \mathrm{in}$. Find the perimeter of POST.

6) A satellite in geostationary orbit remains above the same point on Earth's surface even as Earth turns. If such a satellite has a $30^{\circ}$ view of the equator, what percentage of the equator is observable from the satellite?

7) $\overrightarrow{T A}$ and $\overrightarrow{T B}$ are tangent to circle $O$. What's wrong with this picture?


