TI-Nspire Student Worksheet for G.G. 49 the relative lengths of chords as compared to their distance from the center of the circle

1.) Select, grab and drag point $A$ or point $B$. What happens to the length of $O X$ as the length of AB increases?
2.) Select, grab and drag point $A$ or point $B$. What happens to the length of $O X$ as the length of AB decreases?
3.) Select, grab and drag point C or point D . What happens to the length of OY as the length of CD increases?
4.) Select, grab and drag point C or point D . What happens to the length of OY as the length of CD decreases?
5.) In circle O chords PQ and RS are drawn and chord PQ is closer to point O than chord RS. What can you conclude about the lengths of O chord PQ and chord RS?
$\qquad$
6.) What is the longest chord in a circle? $\qquad$
7.) How far from the center is the longest chord you can draw in a circle?

