[PROBLEM OF THE WEEK #1]

Due 1/15

Page 479 #84

For a small paragraph on highway design, read page 473-474

A simple horizontal curve is shown below. The points P and S mark the beginning and end of the curve. Let Q be the point of intersection where two straight sections of highway would meet if extended. The radius of the curve is r, and the angle θ, denotes how many degrees the curve turns. If $r = 765$ ft & $\theta = 83°$, find the distance between P and Q.