



At Q, the midpoint of RB, draw a circle of radius 167.13' through A, B and C.

$$117.2835/QA = \sin \Delta = 0.701750135, \Delta = 44^\circ 34' 03'', \text{ so angle AQR} = 135^\circ 25' 57''$$

By the Law of Cosines:

$$AR^2 = 167.13^2 + 167.13^2 - (2)(167.13)(167.13) \cos 135^\circ 25' 57'',$$

so  $AR = 309.2965$

$$\text{Angle RAQ} = \text{angle ARQ} = \frac{180^\circ - 135^\circ 25' 57''}{2} = 22^\circ 17' 01.5''$$

$$AB = AR \cdot \tan(\Delta/2) = 309.2965 \cdot \tan 22^\circ 17' 01.5'' = 126.750$$

$$AC_{\text{Arc length}} = AR \cdot \Delta_{(\text{radians})} = 309.2965 \cdot (44^\circ 34' 03'')(\pi/180) = 240.562$$

PI – tangent = PC, PC + arc length = PT

$$10+00 - 126.75 = 8+73.25, \text{ PT} = 8+73.25 + 240.562 = 11+13.812$$