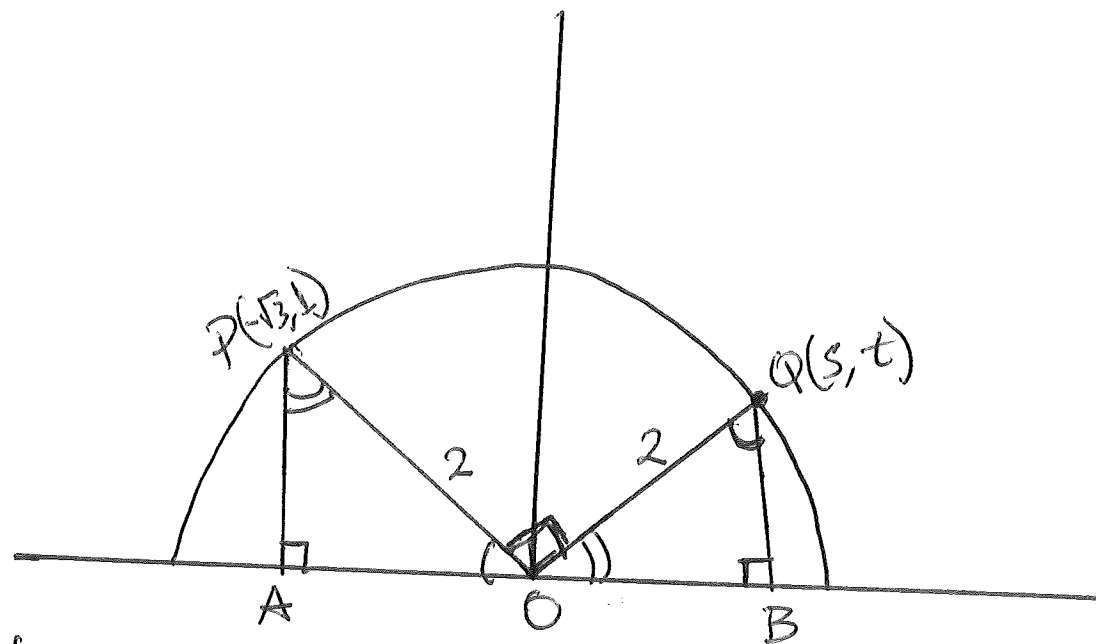




$\angle AOP$ can equal
 30, 60, 45 etc,
 so can't use 30-60-90, or 45-45-90 logic
 to derive result.

Proof that $\angle QOB = \angle OPA$

$90 + \angle QOB = \angle OPA + 90$ [extended side of $\triangle POA$]

$$\angle QOB = \angle OPA.$$

Similar result follows for $\angle POA = \angle OQB$

so $\triangle POA$ similar to $\triangle QOB$

It follows then that

$$\frac{\overline{OP}}{\overline{OQ}} = \frac{\overline{PA}}{\overline{OB}}$$

$$\frac{2}{2} = \frac{1}{\overline{OB}}$$

$$\overline{OB} = s = 1$$