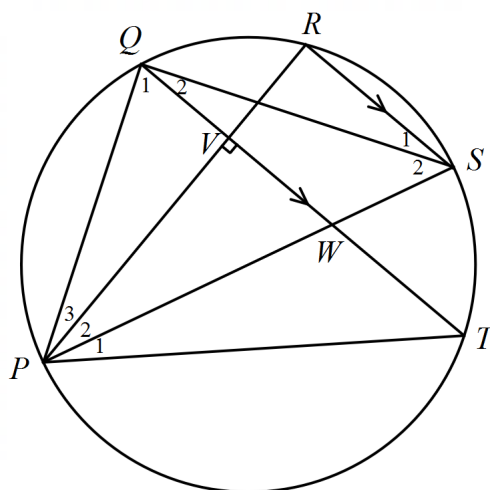


Question 4

PQ and QT are chords of a circle with $PQ < QT$. R is a point on the circle such that $PR \perp QT$ and S is a point on the circle such that $RS \parallel QT$.



Prove that $\hat{P}_1 + \hat{Q}_1 = 90^\circ$.

Memo

Let $\hat{P}_1 = x$

$\therefore \hat{Q}_2 = x$ ($\angle$ s in the same seg)

$\therefore \hat{S}_1 = x$ (alt $\angle$ s; $RS \parallel QT$)

$\therefore \hat{P}_3 = x$ ($\angle$ s in the same seg)

$\therefore \hat{Q}_1 = 90^\circ - x$ (ext $\angle$ of Δ)

$\therefore \hat{P}_1 + \hat{Q}_1 = x + 90^\circ - x = 90^\circ$

✓ S ✓ R

✓ S/R

✓ S/R

✓ S/R

(5)