

Question 4 (5 marks)



Candidate L

Let $\hat{Q}_1 = x$

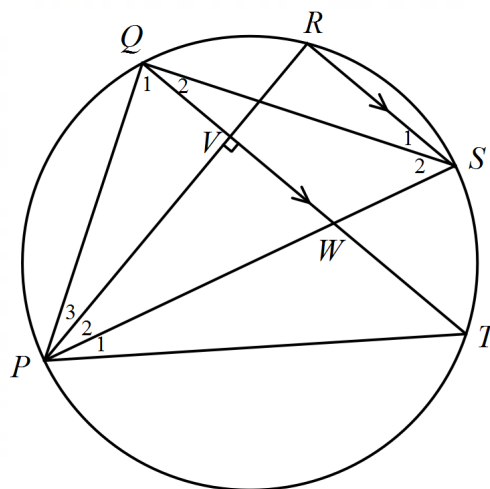
$$\therefore \hat{P}_3 = 90^\circ - x \text{ (ext } \angle \text{ of } \Delta)$$

$$\therefore \hat{S}_1 = 90^\circ - x \text{ (}\angle\text{s in the same seg)}$$

$$\therefore \hat{Q}_2 = 90^\circ - x \text{ (alt } \angle\text{s)}$$

$$\therefore \hat{P}_1 = 90^\circ - x \text{ (}\angle\text{s in the same seg)}$$

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



Candidate M

Let $\hat{P}_1 = x$

$$\therefore \hat{S}_2 = x \text{ (alt } \angle\text{s)}$$

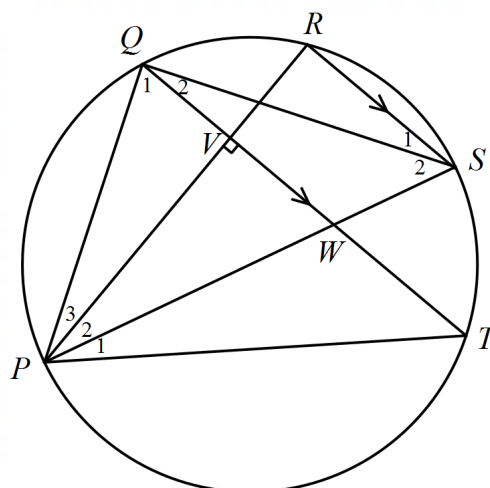
$$\therefore \hat{T} = x \text{ (}\angle\text{s in the same seg)}$$

$$\therefore \hat{VPT} = 90^\circ - x \text{ (}\angle \text{ sum of } \Delta)$$

$$\therefore \hat{P}_3 = x$$

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

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



Candidate N

Draw ST

Let $\hat{P}_1 = x$

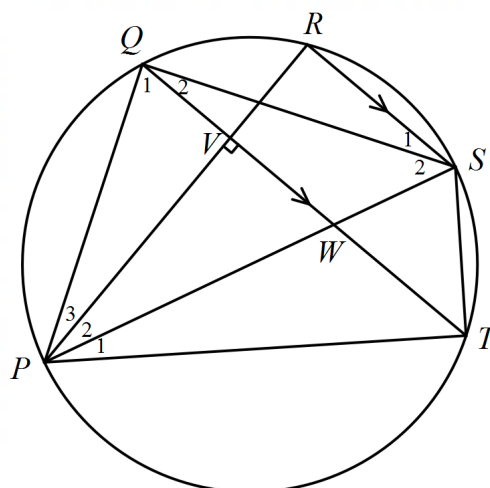
$$\hat{R} = 90^\circ \text{ (corres } \angle\text{s; } RS \parallel QT)$$

$$\therefore \hat{PTS} = 90^\circ \text{ (}\angle \text{ in semicircle)}$$

$$\therefore \hat{PST} = 90^\circ - x \text{ (}\angle \text{ sum of } \Delta)$$

$$\therefore \hat{Q}_1 = 90^\circ - x \text{ (}\angle\text{s in the same seg)}$$

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



Candidate O

$$\hat{R} = 90^\circ \text{ (corres } \angle\text{s; } RS \parallel QT \text{)}$$

$$\therefore \hat{PQS} = 90^\circ \text{ (}\angle\text{s in the same seg)}$$

$$\text{Let } \hat{P}_1 = a$$

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

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

$$\text{Let } \hat{S}_2 = b$$

$$\therefore \hat{T} = b \text{ (}\angle\text{s in the same seg)}$$

$$\therefore \hat{QWP} = a + b \text{ (ext } \angle \text{ of } \Delta \text{)}$$

$$\therefore \hat{P}_2 = 90^\circ - a - b \text{ (}\angle \text{ sum of } \Delta \text{)}$$

