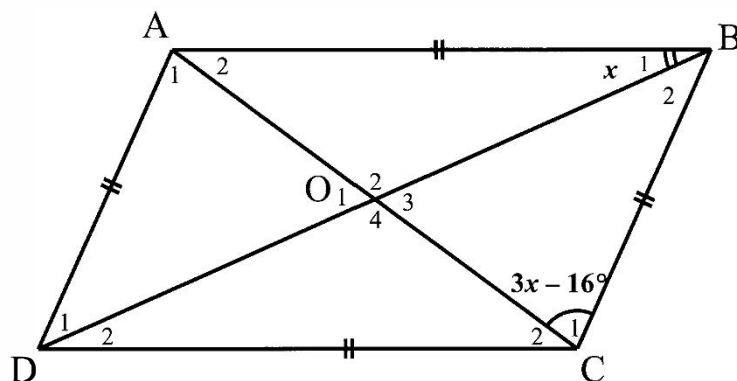


Give reasons for ALL geometry statements in QUESTIONS 8 and 9.

### QUESTION 8

8.1 In the diagram below, the diagonals of a rhombus ABCD intersect at O.

$$\hat{B}_1 = x \text{ and } \hat{C}_1 = 3x - 16^\circ.$$

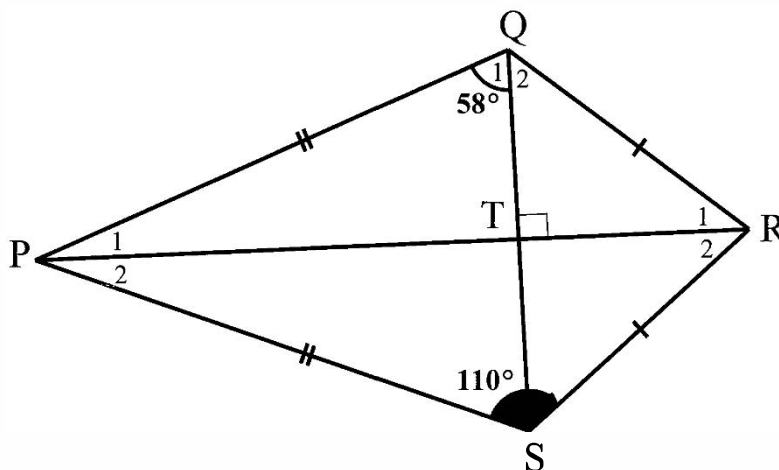


8.1.1 State the value of  $\hat{O}_3$ . (1)

8.1.2 Calculate the value of  $x$ . (3)

8.1.3 Hence, find the value of  $\hat{A}_1$ . (2)

8.2 In the quadrilateral PQRS below,  $\hat{Q}_1 = 58^\circ$  and  $\hat{P}\hat{S}R = 110^\circ$ .  
 $QS \perp PR$ ,  $QR = RS$  and  $PQ = PS$ .



Use the diagram to calculate, with reasons, the size of:

8.2.1  $\hat{P}_1$  (2)

8.2.2  $\hat{R}_2$  (3)

[11]