



## QT - Finding the missing angle

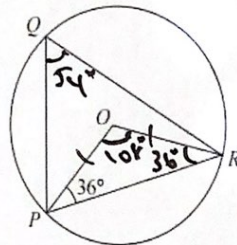


Diagram NOT  
accurately drawn

Reasons

$OP = OR = \text{Radius}$

$\therefore OPR$  is isosceles

$$\begin{aligned}\angle POR &= 180 - 72 \\ &= 108^\circ\end{aligned}$$

$$\angle PQR = 54^\circ$$

Angle at centre twice angle  
at circumference.

- (a)  $P$ ,  $Q$  and  $R$  are points on a circle, centre  $O$ .  
Angle  $OPR = 36^\circ$

Work out the size of angle  $PQR$ .

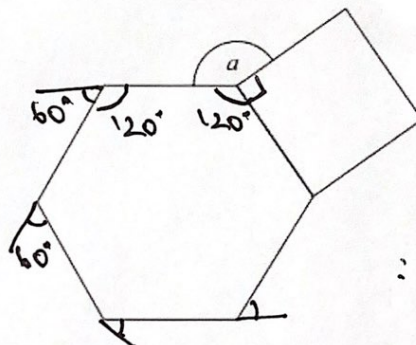


Diagram NOT  
accurately drawn

Regular hexagon  
external angles =  $360^\circ$

$$\therefore \text{External angle} = \frac{360}{6}$$

$$= 60^\circ$$

$$\text{Internal angle} = 120^\circ$$

The diagram shows a regular hexagon and a square.

Calculate the size of the angle  $a$ .

$$\text{Let } a \text{ point add to } 360^\circ$$

$$\angle a = 360 - 120 - 90^\circ$$

$$\therefore \underline{\underline{a = 150^\circ}}$$

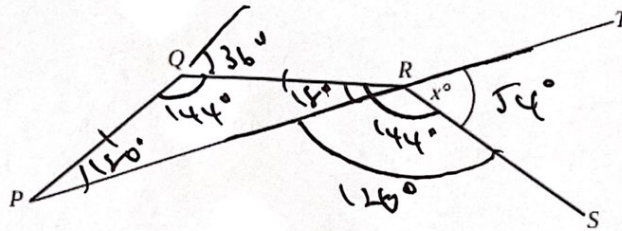


Diagram NOT accurately drawn

PQ, QR and RS are 3 sides of a regular decagon.  
PRT is a straight line.  
Angle TRS =  $x^\circ$

10 sides

External angles add to  $360^\circ$

Work out the value of  $x$

$$\therefore \frac{360}{10} = 36^\circ$$

$$\text{Internal angle } 160 - 36 = 144^\circ$$

$\triangle PQR$  is isosceles



$$\underline{\underline{x = 54^\circ}}$$