QT - Finding the missing angle

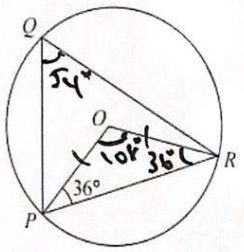

Diagram **NOT** accurately drawn

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

Work out the size of angle PQR.

Reasons
$OP = OR$ = Radius
$\therefore$ OPR is isosceles
$\angle POR = 180° - 72$
$= 108°$

$\angle PQR = 54°$
Angle at centre twice angle at circumference.

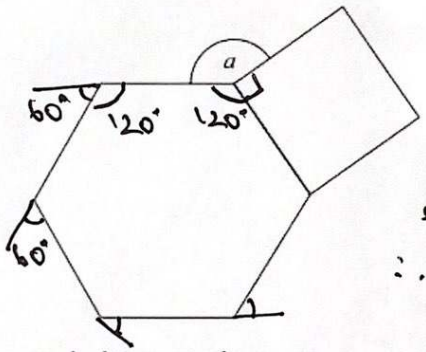

Diagram **NOT** accurately drawn

The diagram shows a regular hexagon and a square.

Calculate the size of the angle a.

Regular hexagon
exterior angles $= 360°$
$\therefore$ Exterior angle $= \frac{360}{6}$
$= 60°$
Interior angle $= 120°$

$\angle$ at a point add to $360°$
$\angle a = 360 - 120 - 90°$ $\therefore a = 150°$

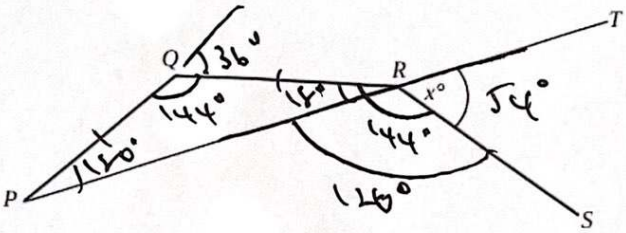

Diagram **NOT** accurately drawn

PQ, *QR* and *RS* are 3 sides of a regular decagon.
PRT is a straight line.
Angle *TRS* = *x*°

Work out the value of *x*

10 sides

Exterior angles add to 360°

$\therefore \frac{360}{10} = 36°$

Interior angle $180 - 36 = 144°$

ΔPQR is isosceles

$x = 54°$