

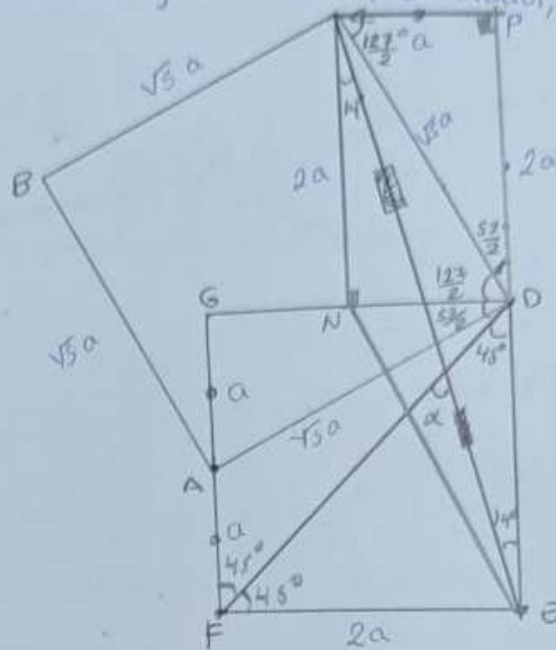
- 1) En el gráfico $AF=AG$, $ABCD$ y $GDEF$ son cuadrados, Calcule α

$$\triangle AGD \cong \triangle CPD$$

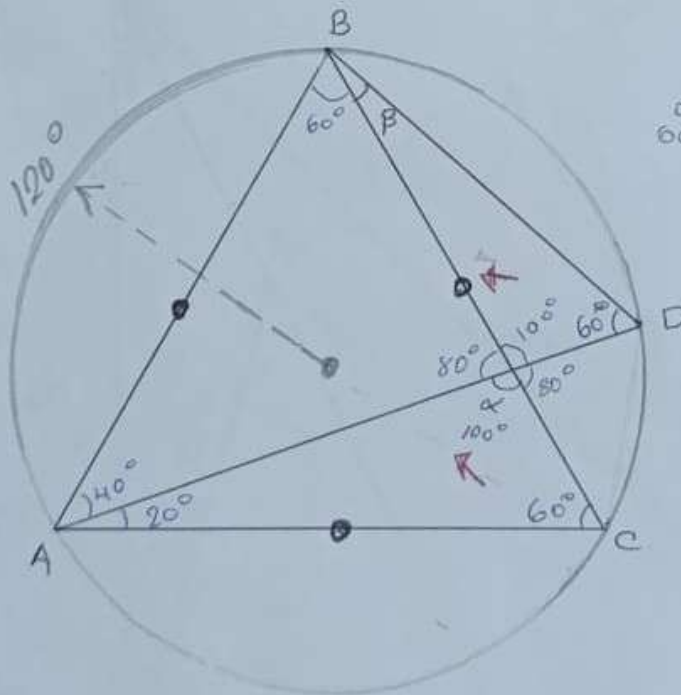
$$\triangle NCH \cong \triangle EHD$$

$$45^\circ + 14^\circ = \alpha$$

$$\alpha = 59^\circ$$



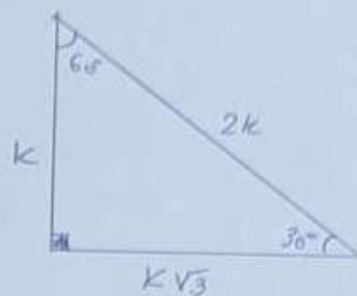
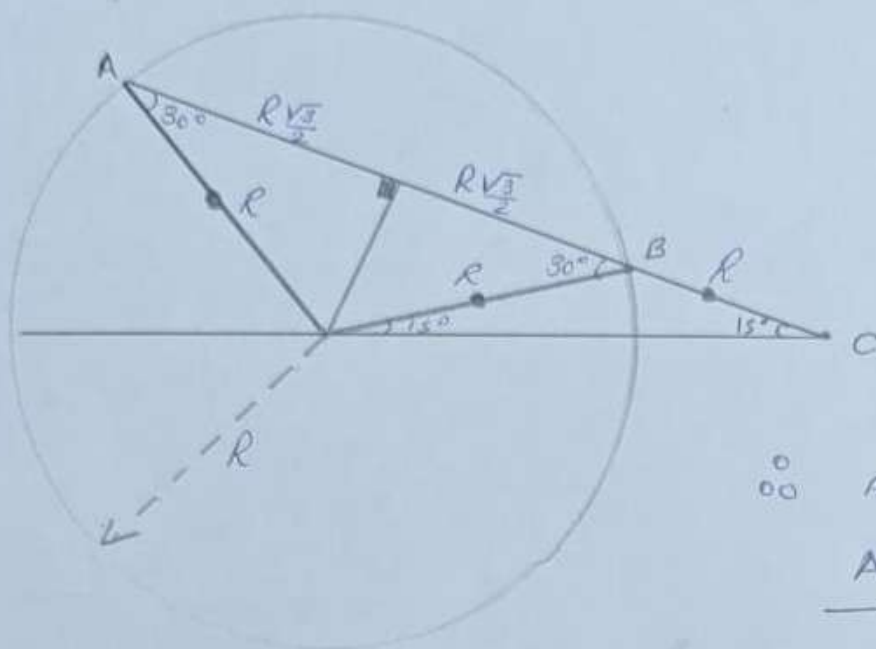
- 2) En el gráfico, ABC es un triángulo equilátero y la medida del ángulo α es 100° . Calcule la medida del ángulo β



$$100^\circ + 60^\circ + \beta = 180^\circ$$

$$\beta = 20^\circ$$

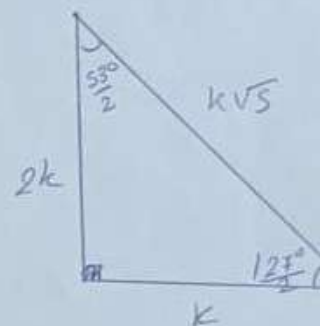
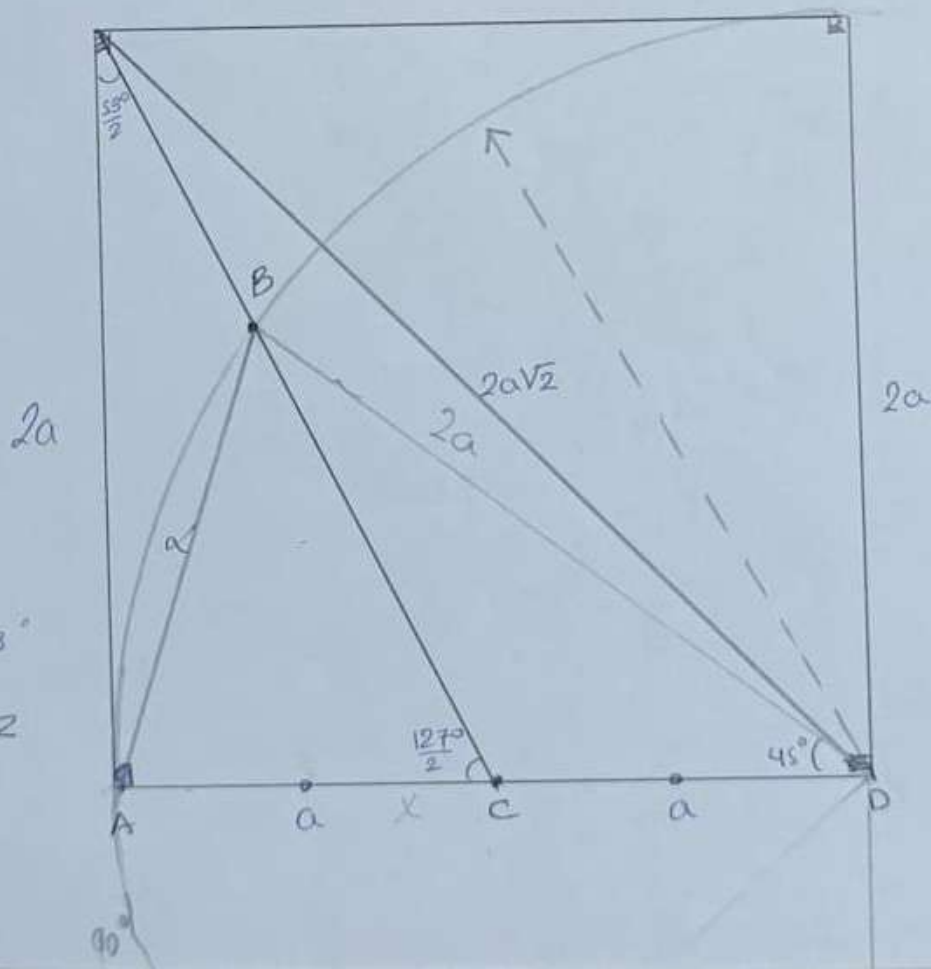
3) En el gráfico, $BC = R$. Calcule AB



$$AB = 2 \left(\frac{R\sqrt{3}}{2} \right)$$

$$AB = R\sqrt{3}$$

4) Según el gráfico, $AC = CD$. Calcule $m\widehat{AB}$



$$\frac{53^\circ}{2} = \frac{90^\circ - \alpha}{2}$$

$$\alpha = 90^\circ - 53^\circ$$

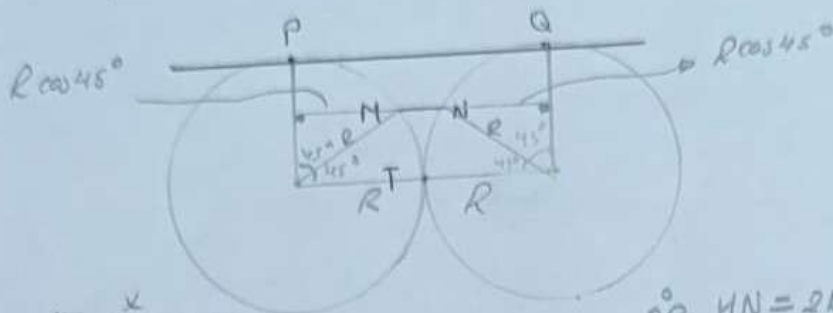
$$\alpha = 37^\circ$$

CIRCUNFERENCIAS

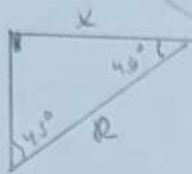
Estudiante: Copcha Poma Angel Lenin

SEMESTRE: "IX" A

- 1) Del gráfico P, T, Q : Son puntos de tangencia calcula $\widehat{MN}$. Si $m\widehat{PH} = m\widehat{MT}$, $m\widehat{TN} = m\widehat{NQ}$



$$\cos 45^\circ = \frac{\sqrt{2}}{2}$$



$$\cos 45^\circ = \frac{x}{R}$$

$$x = R \cos 45^\circ$$

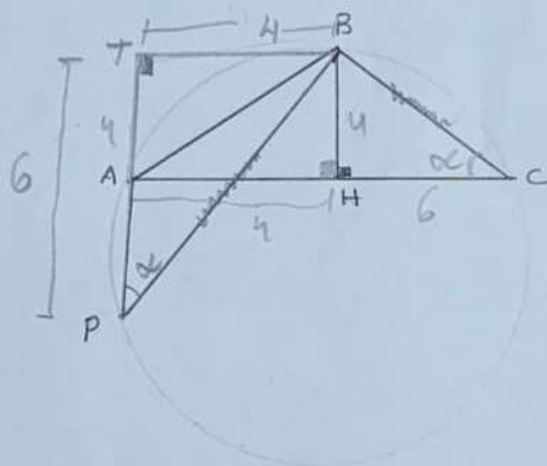
$$\therefore HN = 2R - 2(R \cos 45^\circ)$$

$$MN = 2R - 2\left(R \frac{\sqrt{2}}{2}\right)$$

$$MN = 2R - R\sqrt{2}$$

$$MN = R(2 - \sqrt{2})$$

- 2) Del gráfico $PB = BC$, $HC = 6m$, $AH = 4m$ Calcula AP

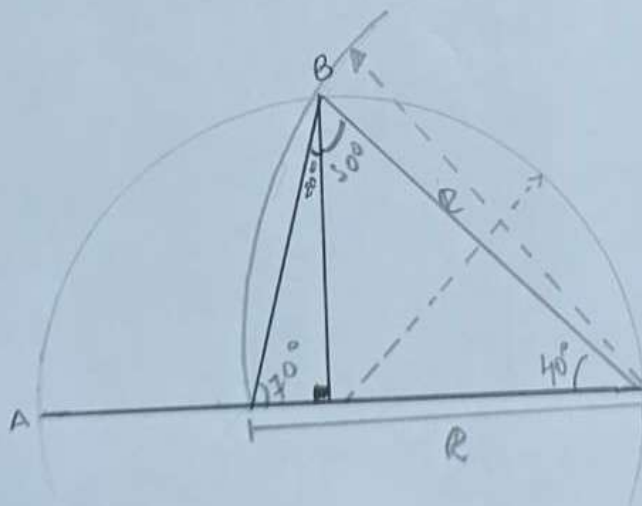


$$\triangle PAB \cong \triangle BAC$$

$$\therefore AP = 6 - 4$$

$$AP = 2m$$

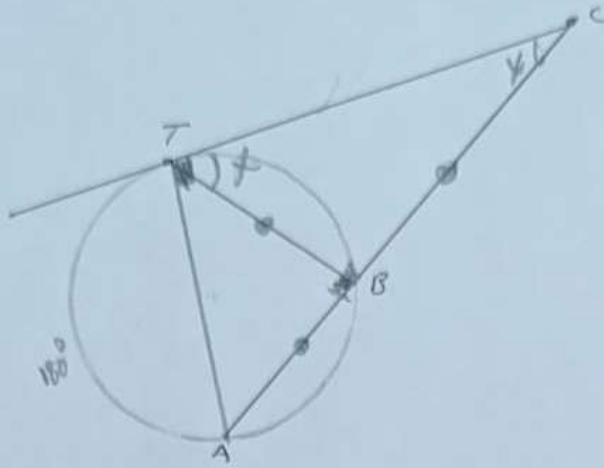
- 3) Del gráfico, calcule $m\widehat{AB}$



$$\frac{1}{2} m\widehat{AB} = 40^\circ$$

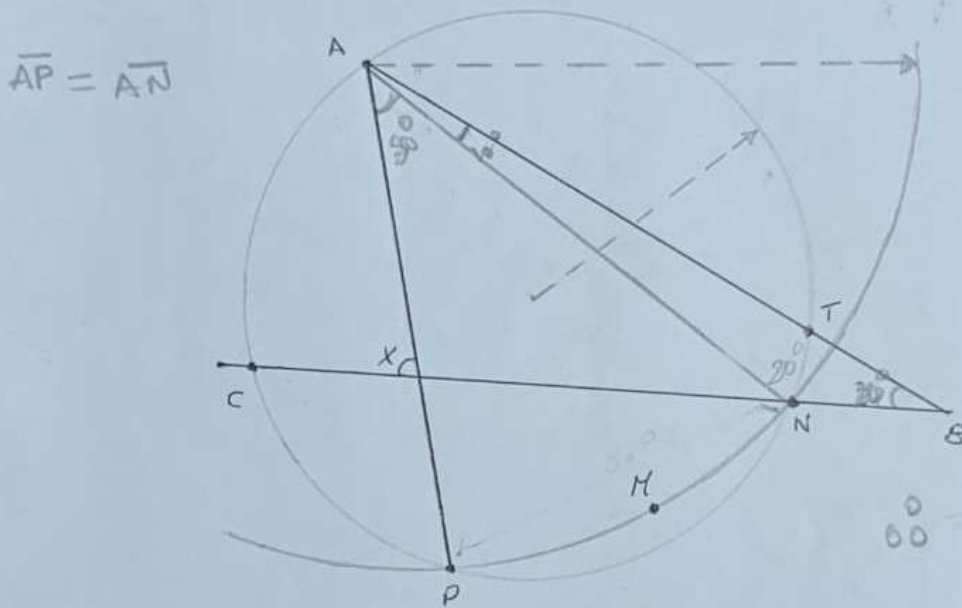
$$m\widehat{AB} = 80^\circ$$

- ④ En el gráfico mostrado, T es punto de tangencia, $AB = BC$. Calcule X.



$$\begin{aligned} 2K &= 90^\circ \\ K &= 45^\circ \end{aligned}$$

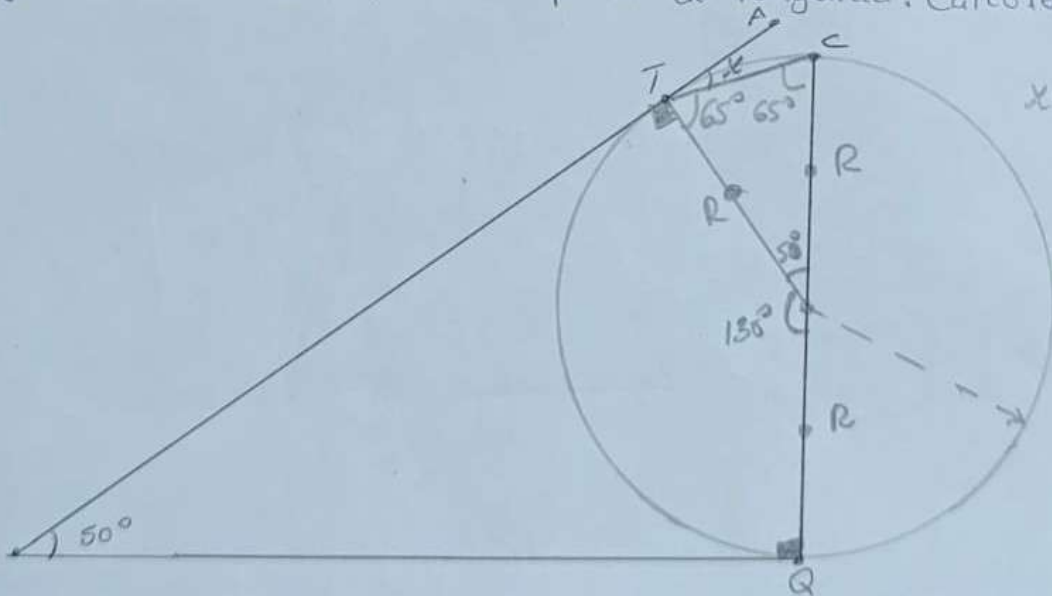
- 5) Del gráfico $m\widehat{TN} = m\angle TBN = 20^\circ$, $m\widehat{PN} = 50$; calcule x



$\angle PMN = 80^\circ$
 $\angle PNM = 100^\circ$
 $\angle PNT = 120^\circ$
 $\angle PAT = 60^\circ$

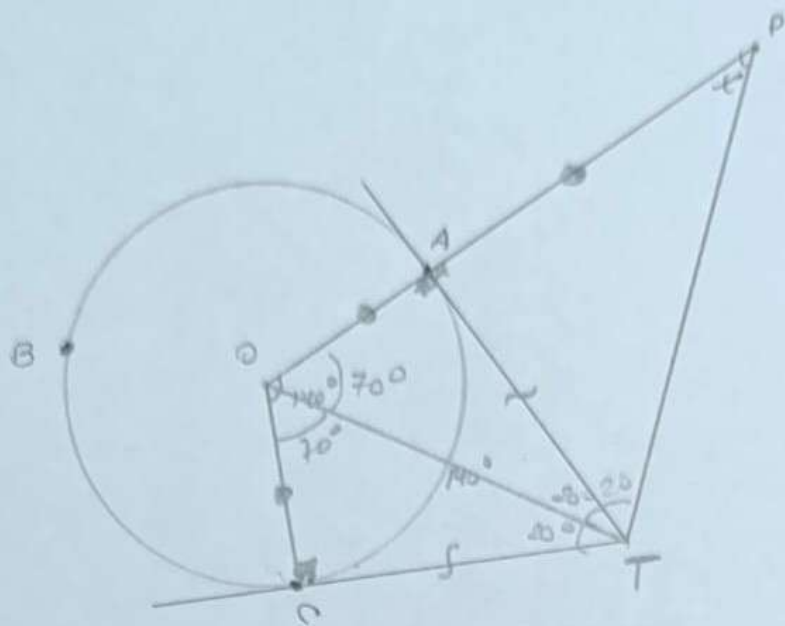
$$\begin{aligned} 60^\circ - x &= 20^\circ + 60^\circ \\ x &= 80^\circ \end{aligned}$$

- 6) En el gráfico mostrado, T y Q son puntos de tangencia. Calcule $m \angle ATC$



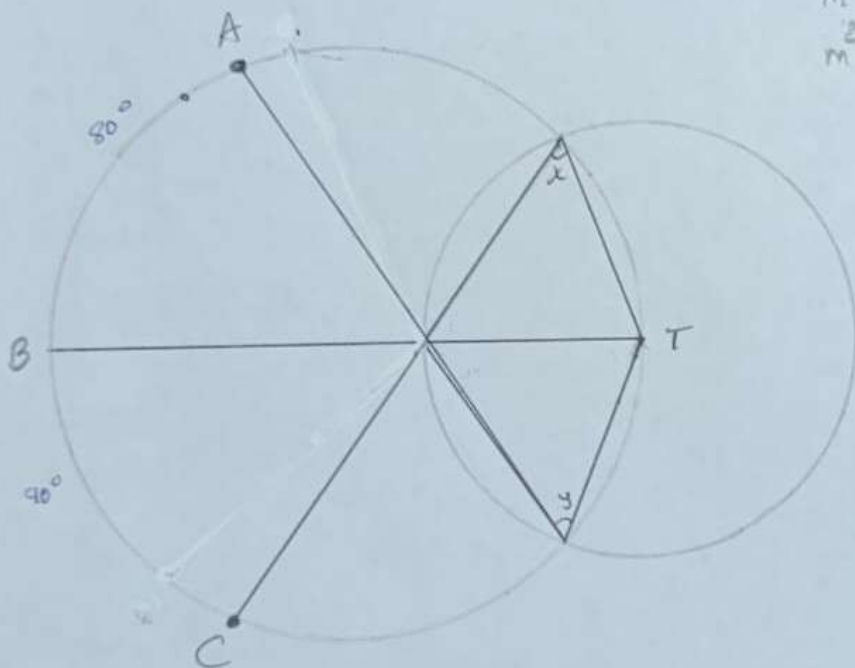
$$\begin{aligned} x + 65^\circ &= 90^\circ \\ x &= 25^\circ \end{aligned}$$

- $$m\widehat{ABC} = 92^\circ$$


$$\Delta CAT \cong \Delta ATP$$

$\phi = 70^\circ$

- 8 En el gráfico $m \widehat{AB} = 80^\circ$ y $m \widehat{BC} = 90^\circ$ Calcule $x+y$



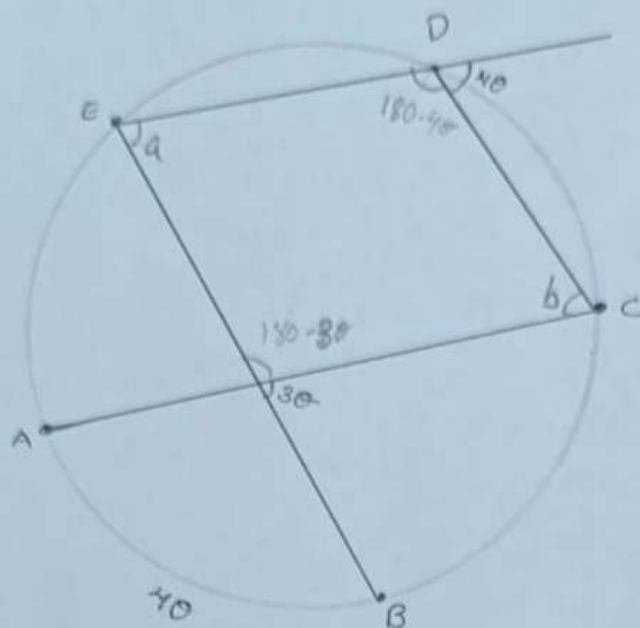
$$\begin{aligned} m \overleftrightarrow{CT} &= 2K \\ m \overleftrightarrow{AT} &= 2y \end{aligned}$$

$$\textcircled{00} \quad 90^\circ + 80^\circ + 2y + 2x = 360^\circ$$

$$2y + 2x = 190^\circ$$

$$\underline{x+y = 95^\circ}$$

9 En el gráfico Calcule el valor de θ



$$180^\circ - 30^\circ + 180^\circ - 40^\circ + a + b = 360^\circ$$

$$a + b = 70$$

$$2a + 2b = 140$$

$$m\widehat{AD} = 2b$$

$$m\widehat{DB} = 2a$$

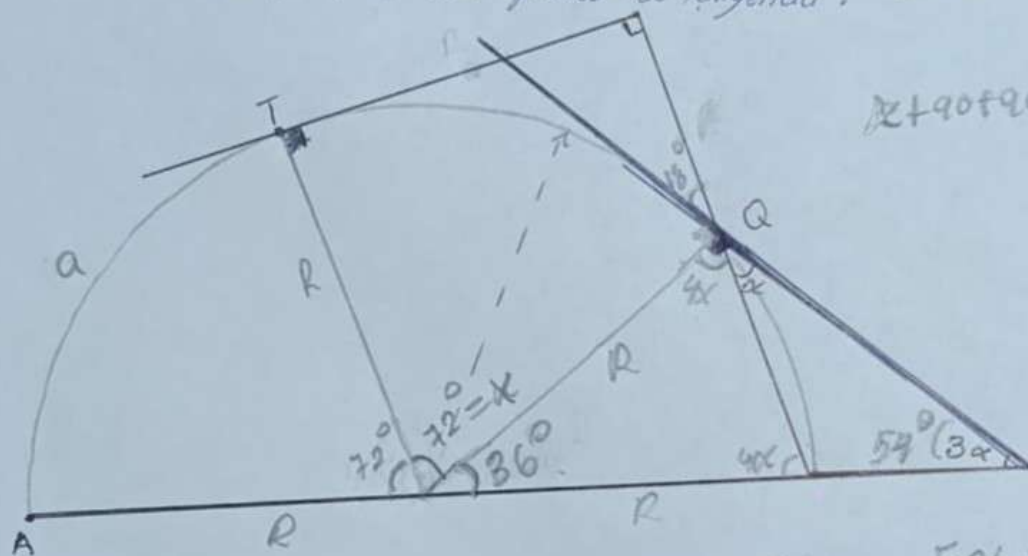
$$2a + 2b + 40 = 360^\circ$$

$$140 + 40 = 360^\circ$$

$$180 = 360^\circ$$

$$\theta = 20^\circ$$

10 En el gráfico mostrado, T y Q son puntos de tangencia. Calcule $m\widehat{AT}$



$$x + 90 + 90 + 18 + 20 = 360$$

$$x = 72^\circ$$

$$5x = 90^\circ$$

$$x = 18^\circ$$

$$a = 72^\circ$$