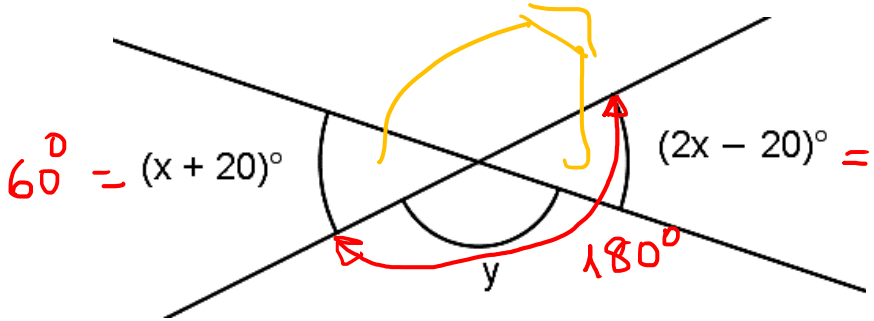
# Avaliação diagnóstica
# parte 2

Determine o valor de y, em graus, na figura.

ângs. op. vértice




$x + 20 = 2x - 20$

$20 + 20 = 2x - x$

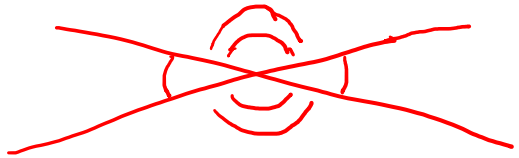
$x = 40$

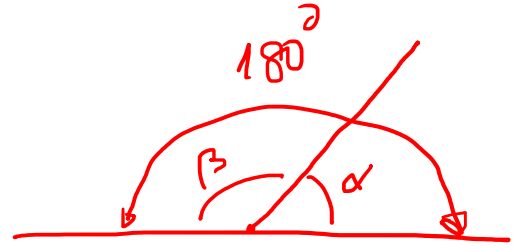
$x + 20 = 60$

$2x - 20 = 60$

$y + 60^\circ = 180^\circ$

$y = 120^\circ$

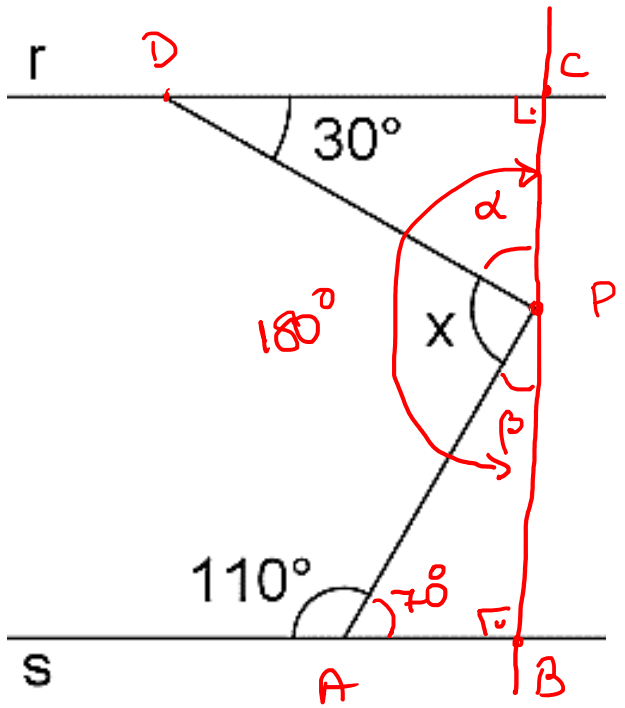





$\therefore \alpha + \beta = 180^\circ$

$r // s$

Sabendo que as retas r e s são paralelas entre si, determine o valor de x, em graus.




Traçar reta t tal que $P \in t$ e $t \perp r$ e $t \perp s$

$\triangle DCP$ retângulo

$\therefore \alpha + 30^\circ = 90^\circ \Rightarrow \alpha = 60^\circ$

$\triangle ABP$ retângulo

$\beta + 70^\circ = 90 \Rightarrow \beta = 20^\circ$

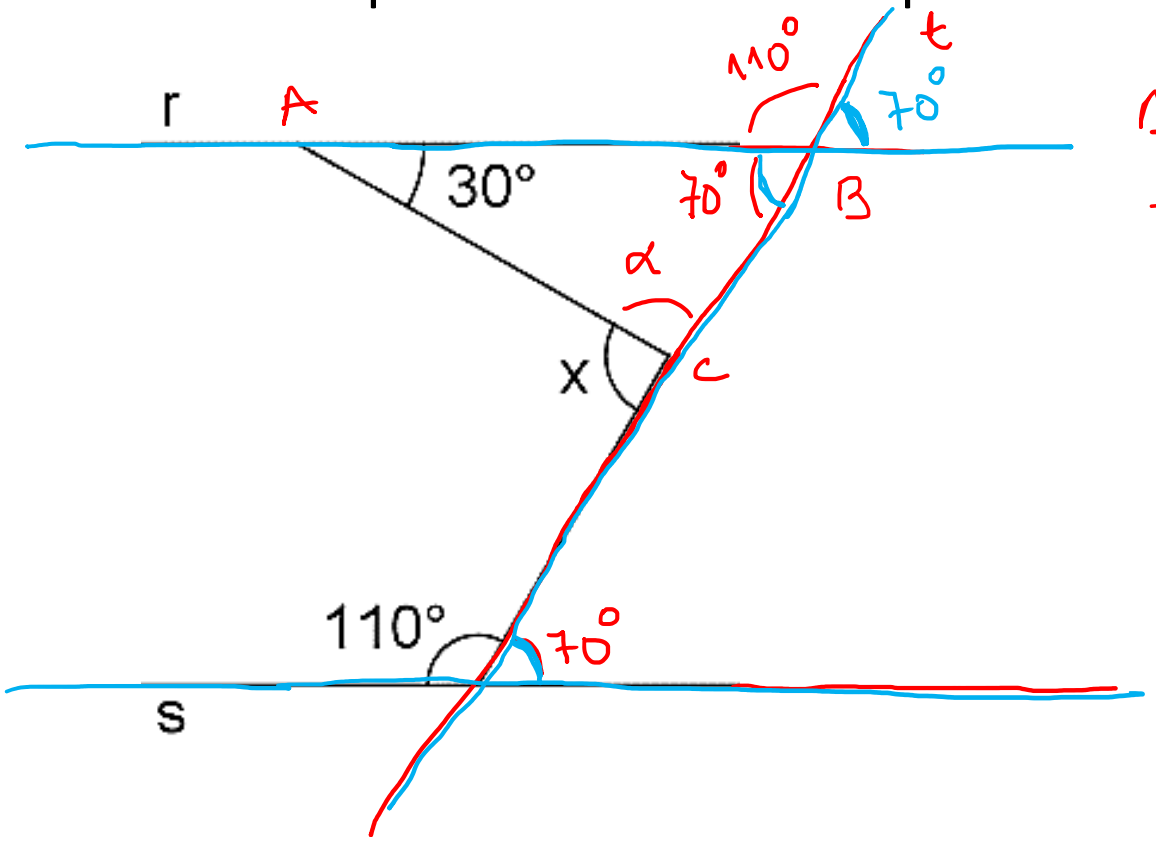
Logo, $60^\circ + x + 20^\circ = 180^\circ$

$\boxed{x = 100^\circ}$

$med(P\hat{A}B) = 180^\circ - 110^\circ = 70^\circ$

r // s

Sabendo que as retas r e s são paralelas entre si, determine o valor de x, em graus.



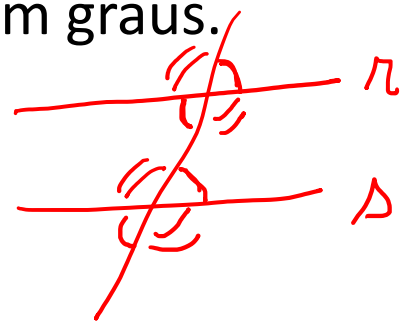

$\Delta ABC$

$30^0 + 70^0 + \alpha = 180^0$

$\therefore \alpha = 80^0$

Logo, $x + \alpha = 180^0$

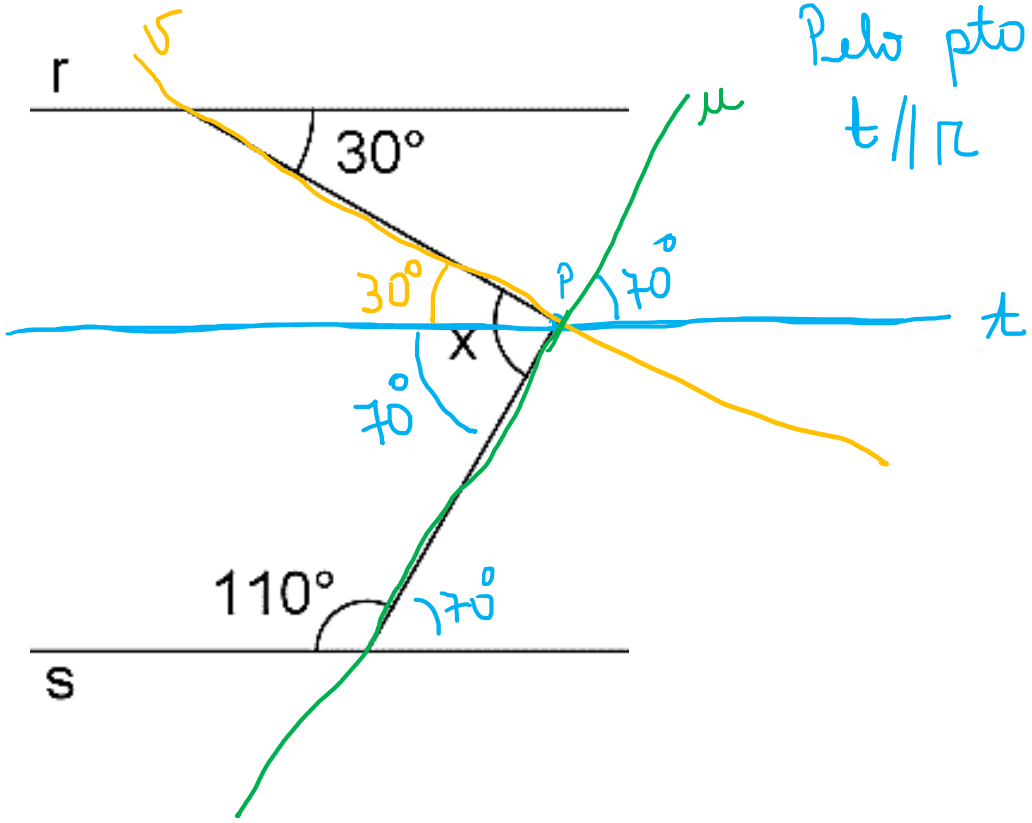
$\boxed{x = 100^0}$




r // s

$r // s$

Sabendo que as retas r e s são paralelas entre si, determine o valor de x, em graus.



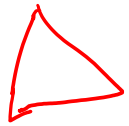

Pelo pto P, vamos traçar a reta t tal que $t // r$

Logo, $x = 30^0 + 70^0 = 100^0$

Em cada caso a seguir, diga se existe um triângulo cujos lados tenham essas medidas. Justifique sua resposta

a) 5 cm, 6 cm, 9 cm

b) 100 cm, 150 cm, 300 cm



a medida de cada lado é menor que a soma das medidas dos outros 2 lados.

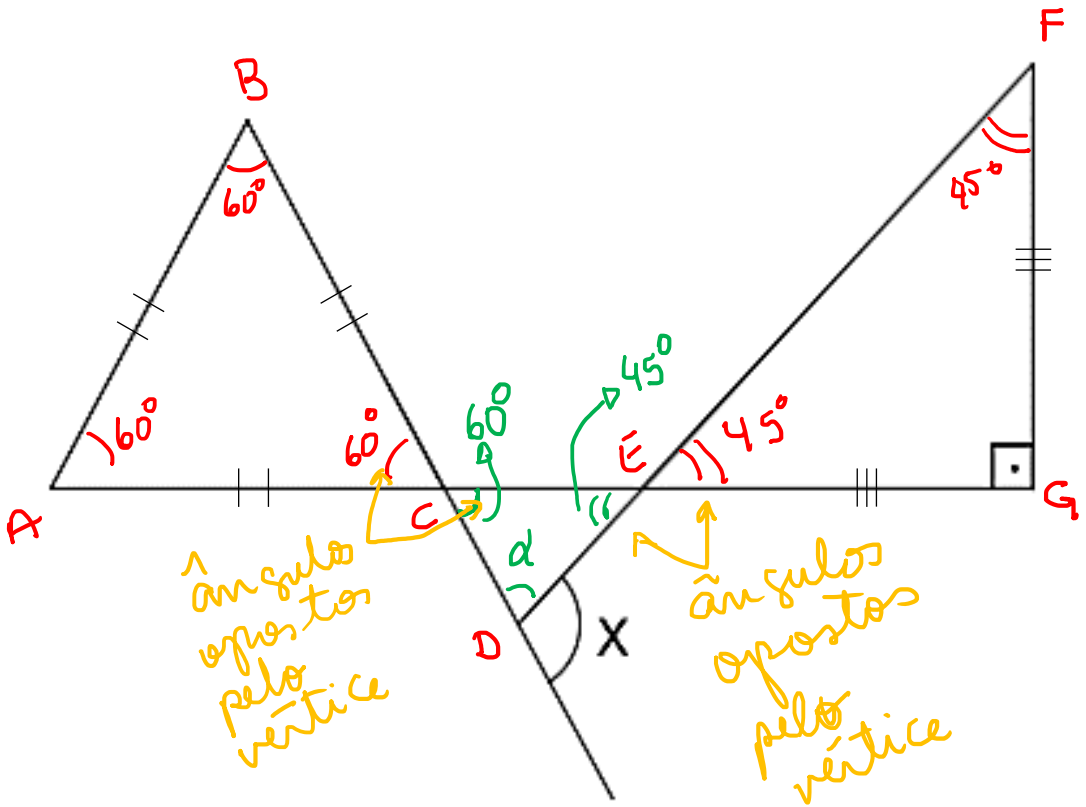
a) $5 < 6+9$ e $6 < 5+9$ e $9 < 5+6$ (suficiente)

Logo, existe um triângulo

b) $100 < 150+300$ e $150 < 100+300$ e $300 > 150+100$

Logo, não existe triângulo

Na figura, segmentos com marcas iguais são congruentes. Determine x, em graus.




$\Delta ABC$ equilátera ∴ os ângulos são congruentes entre si

$\Delta EGF$ retângulo isósceles
⇒ os ângulos agudos são congruentes entre si

$\Delta CDE$ $\quad d + 60^\circ + 45^\circ = 180^\circ$

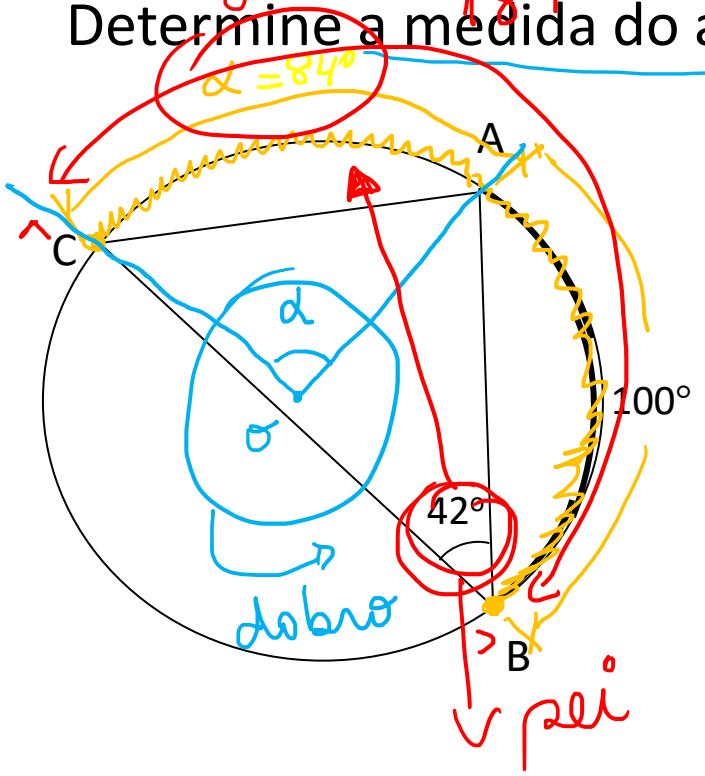
$d = 75^\circ$

Como $d + x = 180^\circ$, então $\boxed{x = 105^\circ}$


deduzo isto, pela propriedade

184°

Determine a medida do arco $\overset{\frown}{BC}$




$C\hat{B}A$

$C\hat{O}A$ ângulo centro associado ao arco $\overset{\frown}{CA}$

$med(\overset{\frown}{BC}) = 100^\circ + \alpha$

$med(\overset{\frown}{CA}) = med(C\hat{O}A)$

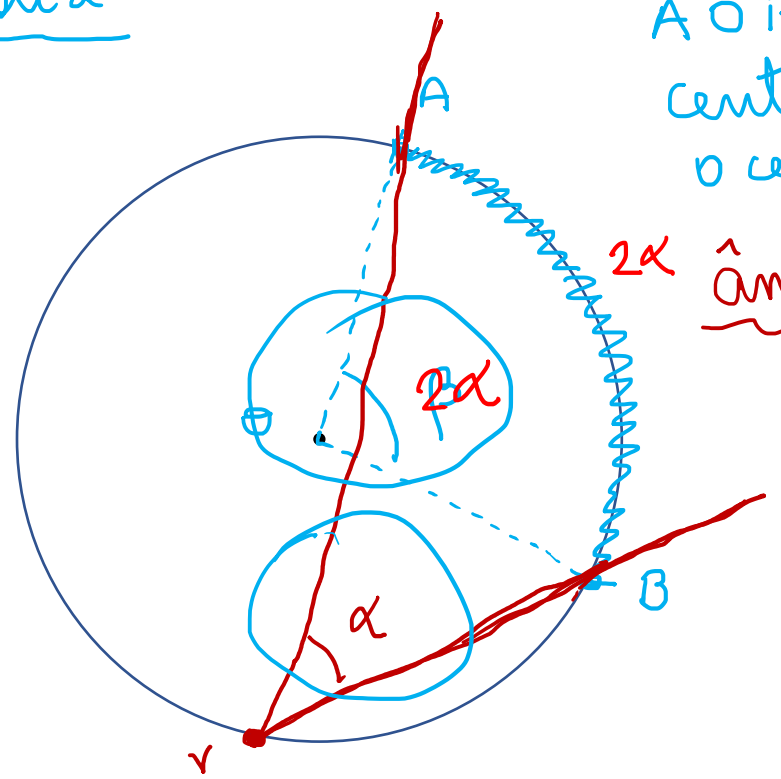
$med(C\hat{O}A) = 2 \cdot med(C\hat{B}A) = 2 \cdot 42^\circ$

$\alpha = 84^\circ$. Logo, $med(\overset{\frown}{BC}) = 184^\circ$

Teoria

circunf. de centro O

$A\hat{O}B$ é ângulo central (vértice é o centro da circunf)




ângulo $A\hat{V}B$

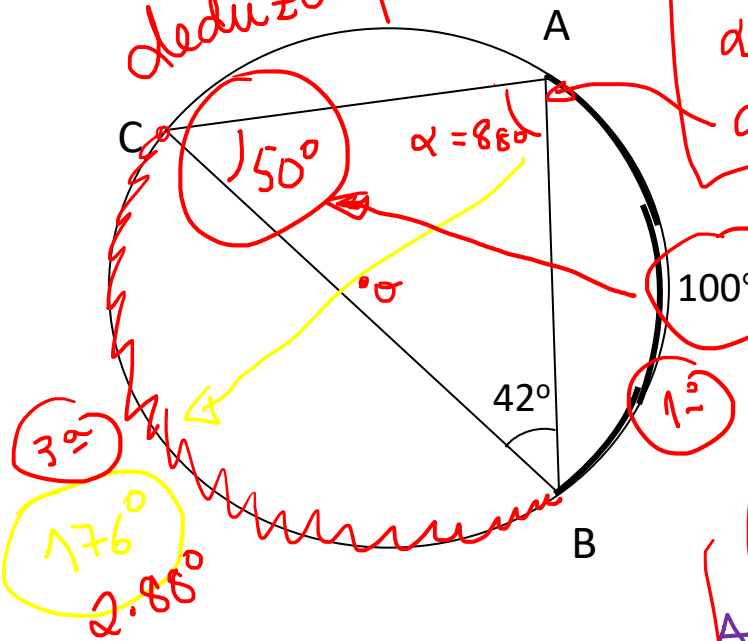
$med(A\hat{V}B) = \alpha$

$med(\overset{\frown}{AB}) = med(A\hat{O}B) = \beta$

e

$\beta = 2\alpha \iff \alpha = \frac{\beta}{2}$

Determine a medida do arco $\overset{\frown}{BC}$

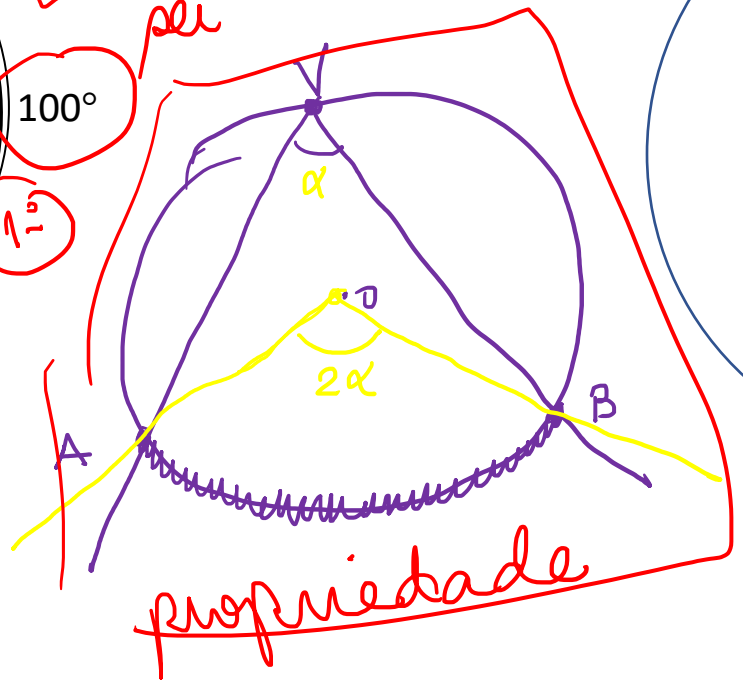



deduzo pela propr.

2º

$\alpha = 180^0 - 50^0 - 42^0$

$\alpha = 88^0$ calculo



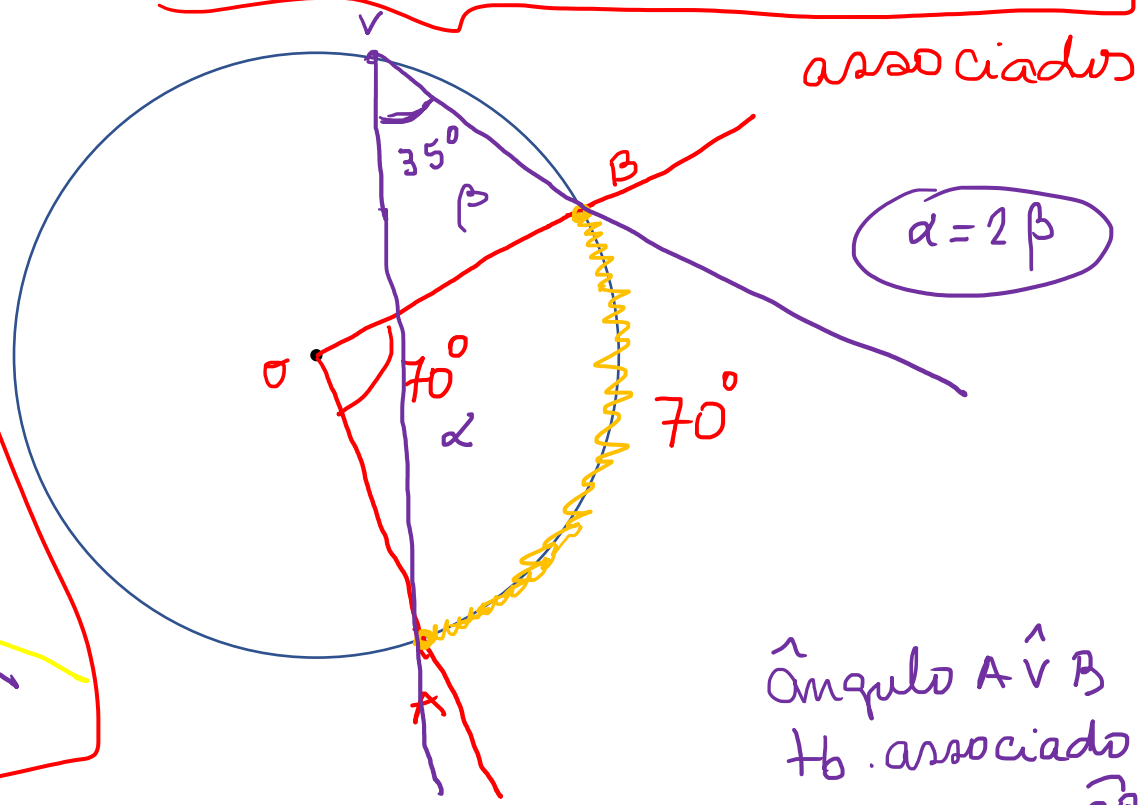

propriedade

$med(\overset{\frown}{CD}) = ?$

$A\hat{C}B \rightarrow$ arco $\overset{\frown}{AB}$

noli soma âng. ints. 180°

circunf. de centro O
A e B ptos da circunf
arco $\overset{\frown}{AB}$ e ângulo $A\hat{O}B$ centrais associados




ângulo $A\hat{V}B$ ↳ associado ao arco $\overset{\frown}{AB}$

$med(\overset{\frown}{AB}) = med(A\hat{O}B)$