

$$\begin{array}{r} 23^{\circ}45' \\ + 23^{\circ}45' \\ \hline 46^{\circ}90' \end{array}$$

$$\begin{array}{r} 23^{\circ}45' \cdot 2 \\ \hline 47^{\circ}30' \end{array}$$

(como são
60°, fazemos
90° - 60° = 30°
e somamos 1°)

A reta \overline{AQ} é
igual ao diâmetro
então temos 180°
para cada lado.

Podemos fazer então:

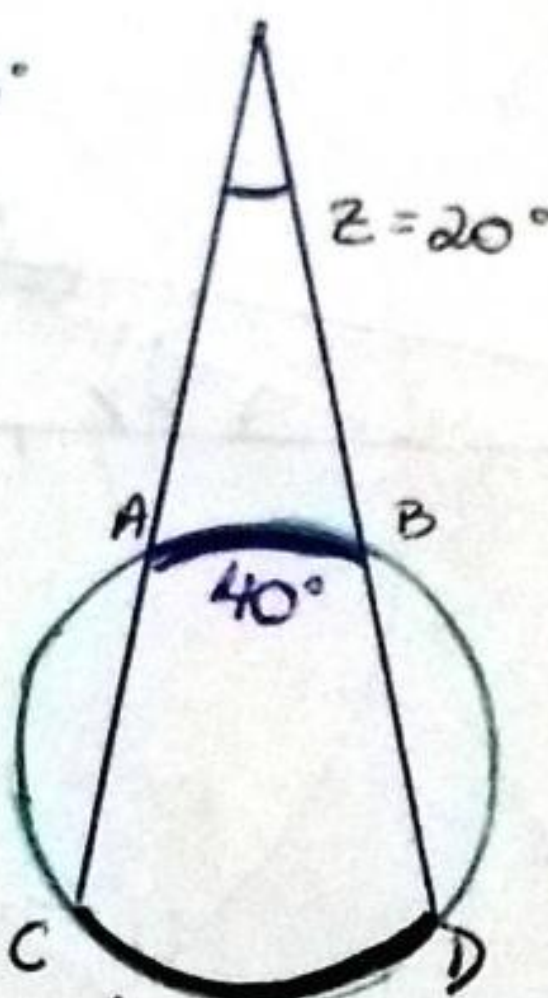
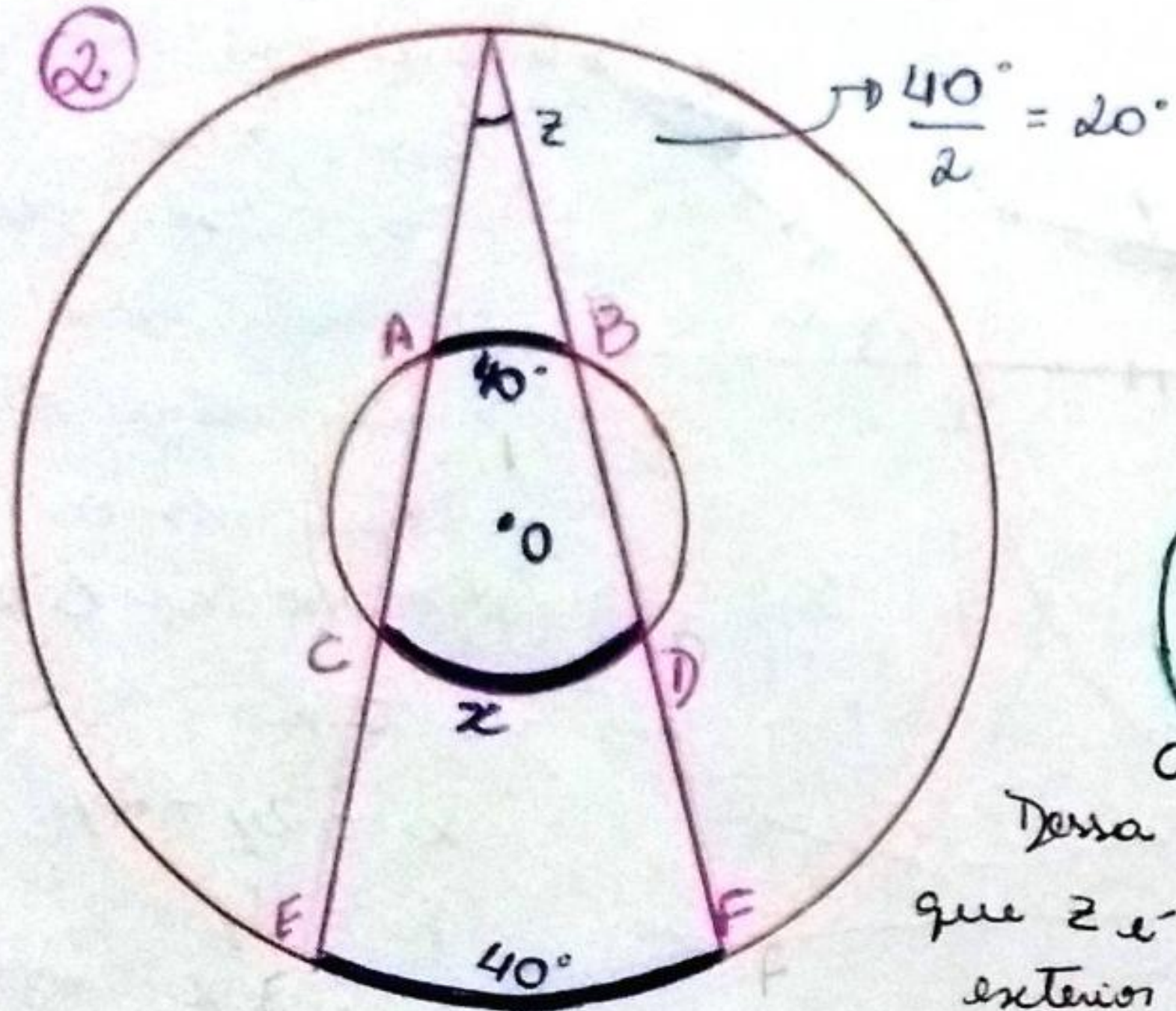
$$\begin{array}{r} 180^{\circ} \\ - 47^{\circ}30' \\ \hline 132^{\circ}29' \end{array}$$

Para acharmos o valor de x ,

fazemos $132^{\circ}29' \div 2$

$$\begin{array}{r} 132^{\circ}29' \div 2 \\ \hline 66^{\circ}14' \\ 02 \\ 09 \\ 1 \end{array}$$

*Somamos o
resto 1 ao
resultado;
 $\Rightarrow 66^{\circ}15'$



Dessa forma, vemos
que z é o excentro
exterior da circunferência.

$$z = \frac{\overline{CD} - \overline{BA}}{2}$$

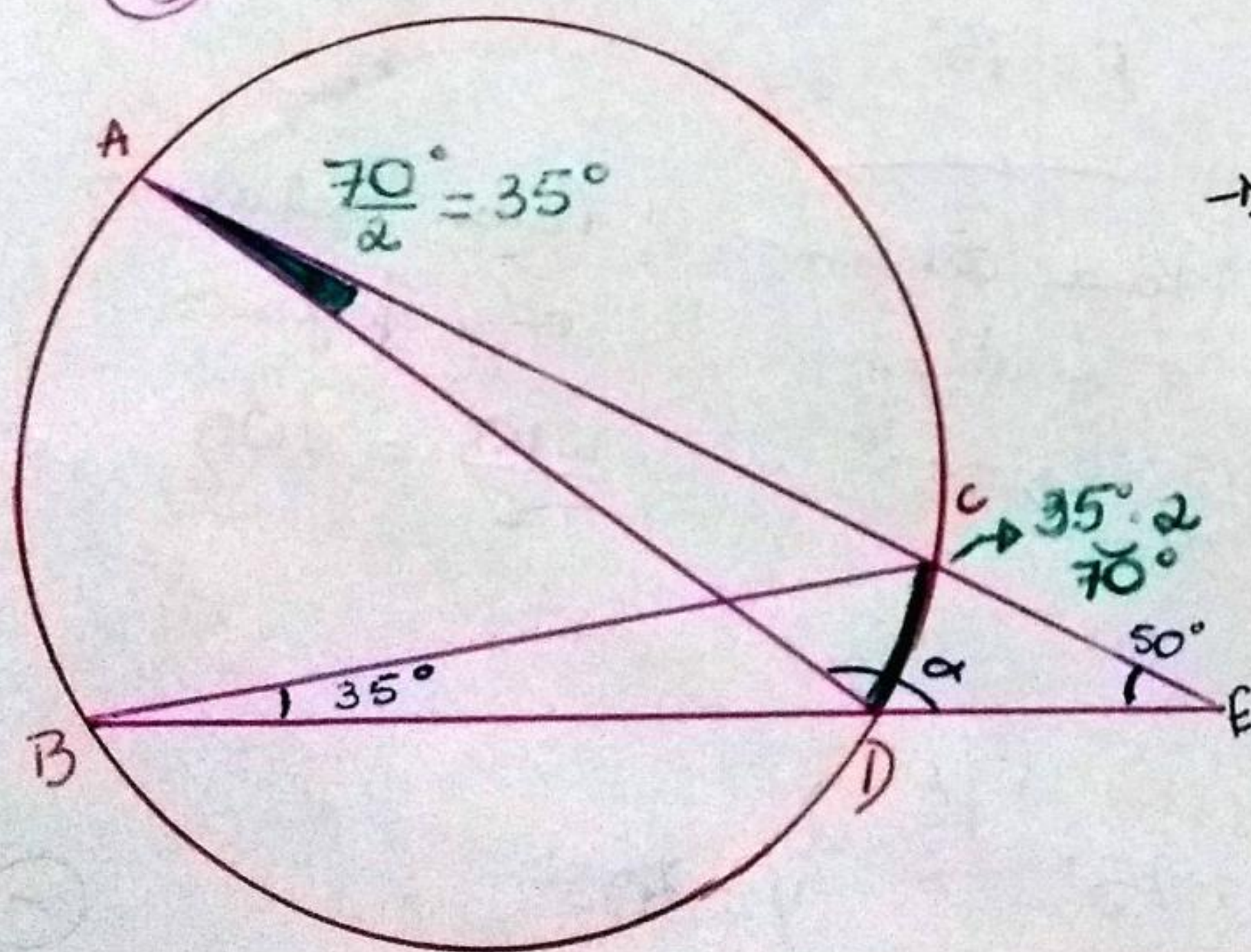
$$\frac{\overline{CD} - 40^{\circ}}{2} = 20^{\circ}$$

$$\overline{CD} - 40^{\circ} = 20^{\circ} \cdot 2$$

$$\overline{CD} = 40^{\circ} + 40^{\circ}$$

$$\overline{CD} = 80^{\circ}$$

③



Achamos o ângulo de A,

então se olharmos o $\triangle ADE$

$$\text{podemos fazer } 35^{\circ} + 50^{\circ} + \alpha = 180^{\circ}$$

$$85^{\circ} + \alpha = 180^{\circ}$$

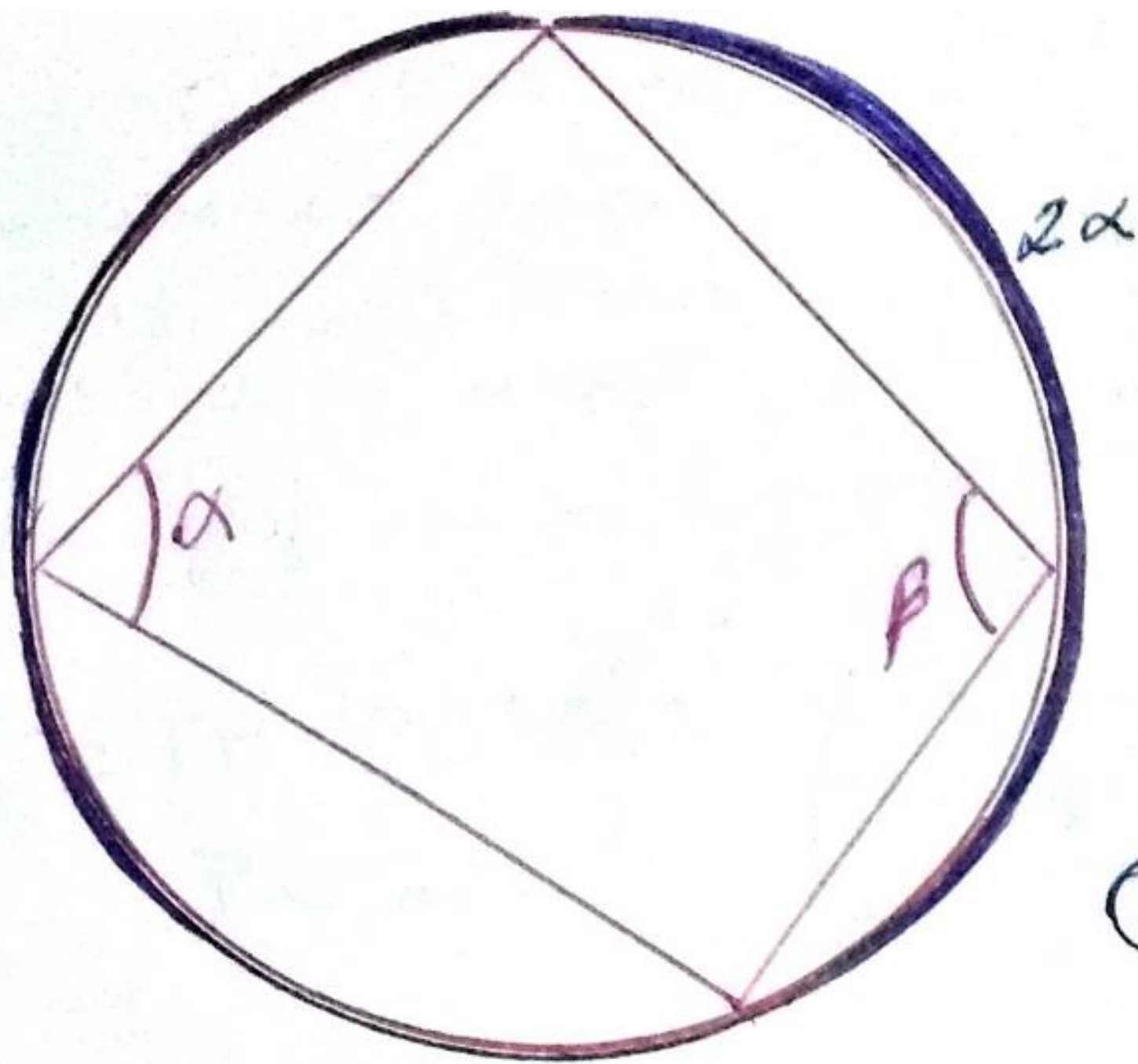
$$\alpha = 180^{\circ} - 85^{\circ}$$

$$\alpha = 95^{\circ}$$

④

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2β



(C)

$$2\alpha + 2\beta = 360^\circ (\div 2)$$

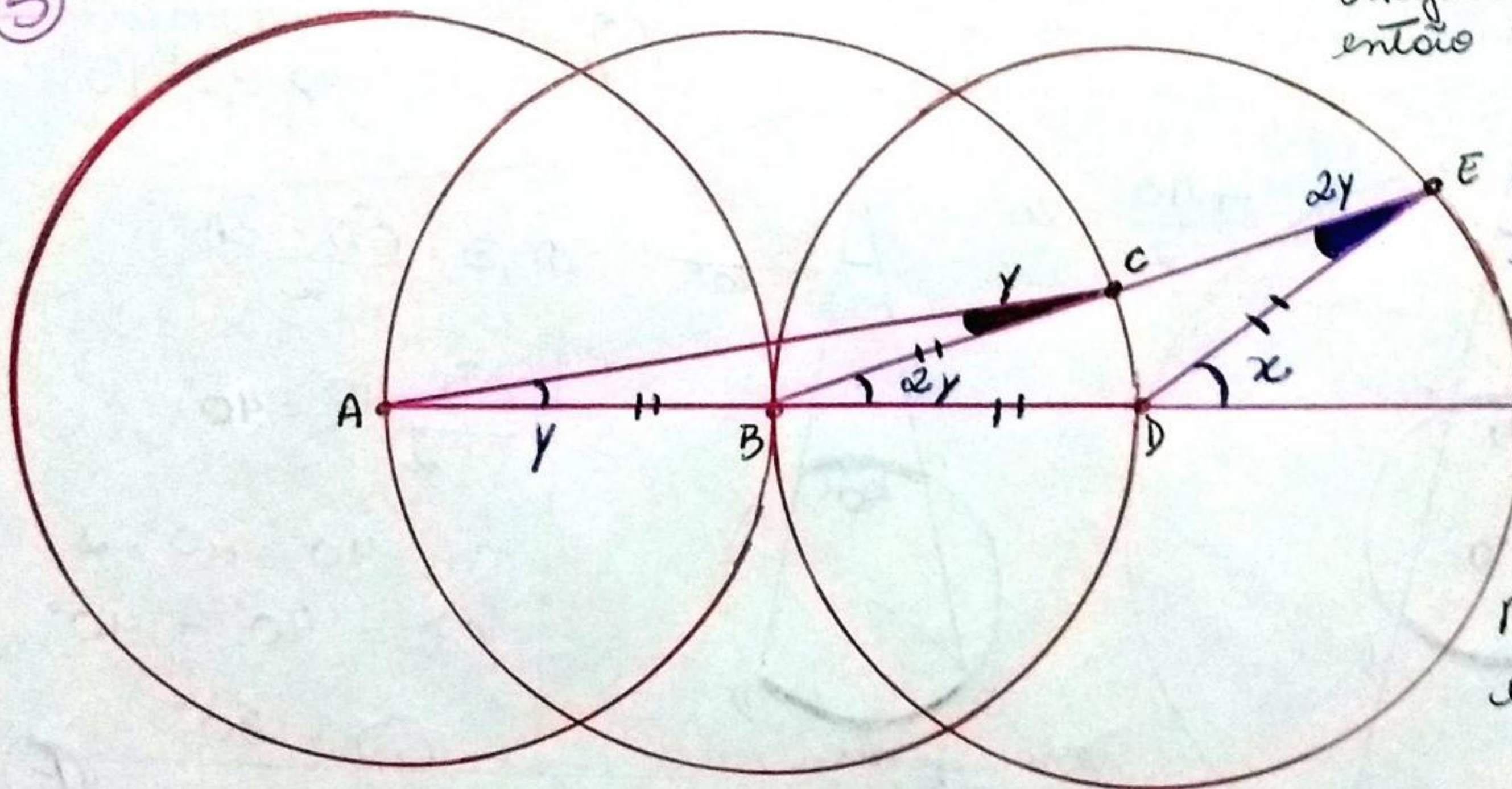
$$\alpha + \beta = 180^\circ$$

convertendo de graus para radianos:

$$2\pi \text{ rad} = 360^\circ$$

$$\pi \text{ rad} = 180^\circ$$

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Segmento $\overline{AB} = \overline{BC}$
então temos um Δ isóceles.

O ângulo externo \hat{C}
terá valor =
a soma dos
dois ângulos
não adjacentes.

Repetimos o
processo no ΔBDE
e temos

$$x = 2y + 2y$$

$$x = 4y$$

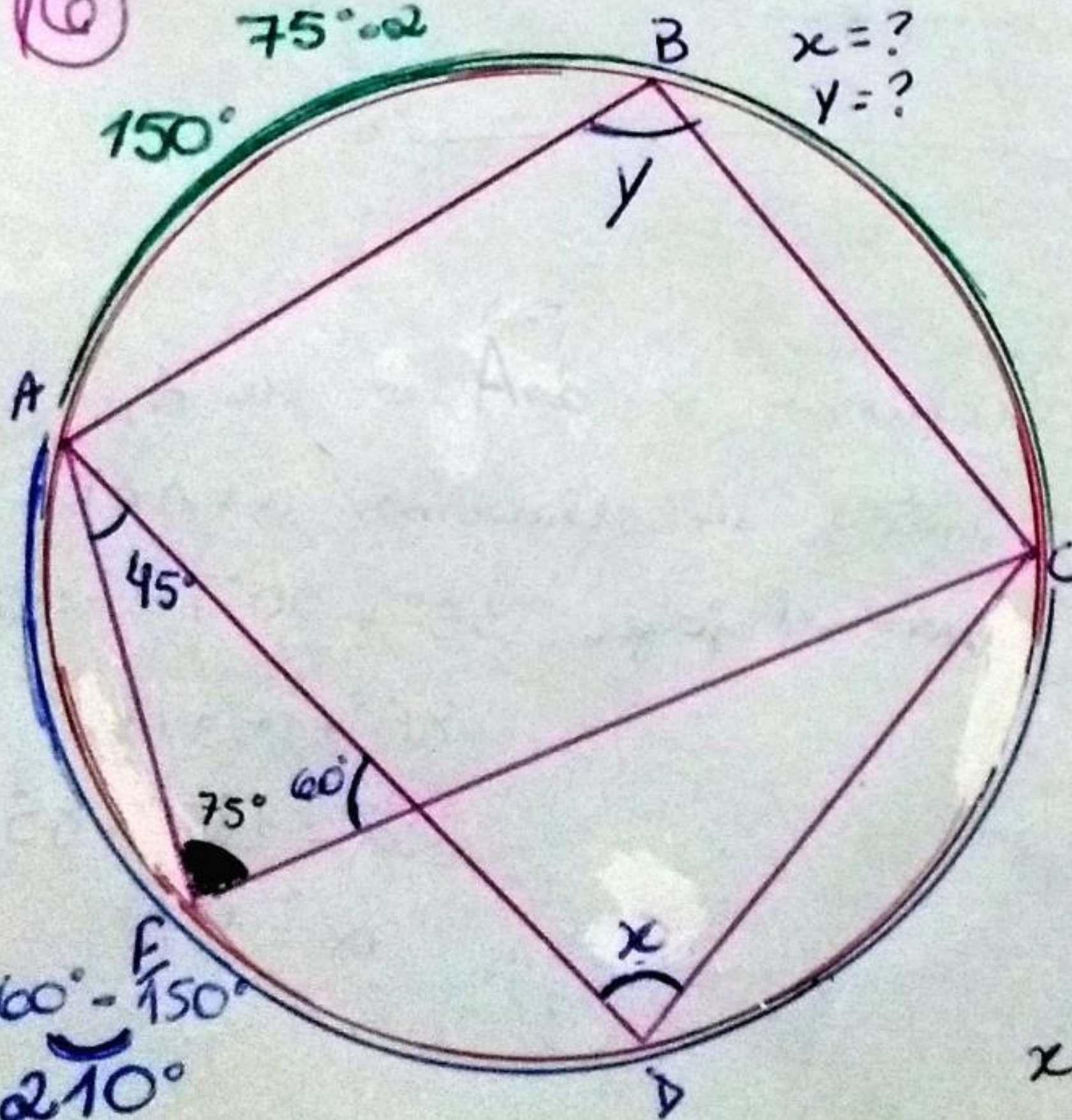
$$y = \frac{x}{4}$$

6

$75^\circ \cdot 2$

150°

$x = ?$
 $y = ?$



$$\hat{F} = (60^\circ + 45^\circ) - 180^\circ$$

$$\hat{F} = 180^\circ - 105^\circ$$

$$\hat{F} = 75^\circ$$

Para acharmos
o x fazemos:

$$\frac{150^\circ}{2} \rightarrow 75^\circ$$

$$x = 75^\circ$$

Para acharmos
o y fazemos:

$$\frac{210^\circ}{2} = 105^\circ$$

$$y = 105^\circ$$

$$360^\circ - \frac{F}{2} - 150^\circ = 210^\circ$$