

Bastariz Gonçalves, Elétrica

Triângulos

①

$$60 + 50 + C = 180$$

$$110 + C = 180$$

$$C = 180 - 110$$

$$C = 70^\circ$$

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$$C + x = 180$$

$$C - 180 = -x$$

$$x = 180 - 70$$

$$\boxed{x = 110^\circ} //$$

②

$$3x + 4x + 5x = 180$$

$$12x = 180$$

$$x = \frac{180}{12}$$

$$12$$

$$\rightarrow \boxed{x = 15^\circ} //$$

$$\textcircled{3} \quad A = 40^\circ \quad \rightarrow \quad B + C = 140^\circ$$

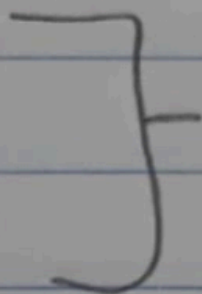
$$I_{BC} = \text{metade dos ângulos } B \text{ e } C \rightarrow B + C = 70^\circ$$

$$I = 180 - 70 \Rightarrow \boxed{I = 110^\circ}$$

$$\textcircled{5} \quad x + y > 30$$

$$x + z > 18$$

$$y + z > 16$$



$$2x + 2y + 2z > 64$$

$$x + y + z > 32$$

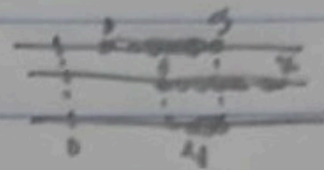
$$\boxed{x + y + z = 33}$$

④

$$\rightarrow 2-3 < x < 2+3 \rightarrow 1 < x < 5$$

$$\rightarrow 2-5 < x < 2+5 \rightarrow 3 < x < 7$$

$$\boxed{x=4}$$



⑥

ADC = isosceles

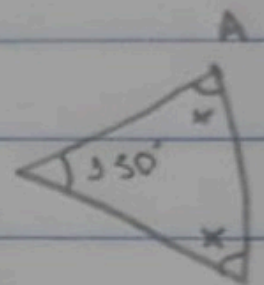
$$x + x + 130 = 180$$

$$A = 25^\circ$$

$$2x = 180 - 130$$

$$x = \frac{50}{2}$$

$$\rightarrow \boxed{x = 25^\circ}$$



ABC = triangle

$$B \Rightarrow 90 + 50 + y = 180$$

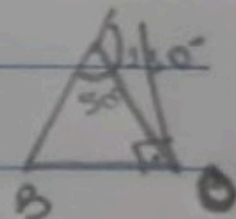
$$140 + y = 180$$

$$y = 180 - 140$$

$$\boxed{y = 40^\circ} \quad B = 40^\circ$$

$$C \Rightarrow 180 - 40 - 50 = 90^\circ$$

$$C = 90^\circ$$



$$\textcircled{8} \quad x + y + y = 180$$

$$x + 2y = 180$$

$$\left\{ \begin{array}{l} x = 180 - 2y \end{array} \right.$$

$$x = 180 - 20^\circ 10'$$

$$\boxed{x = 179^\circ 50'}$$

$$2y = 20^\circ 10' \rightarrow y = 10^\circ 5'$$

$$\textcircled{9} \quad 30 + x = 45$$

$$\boxed{x = 35^\circ}$$

$$\left\{ \begin{array}{l} x + a = 90^\circ \end{array} \right.$$

$$a = 90 - 35 \rightarrow \boxed{a = 55^\circ}$$

$$30 + y = 90^\circ$$

$$y = 90 - 30$$

$$\boxed{y = 60^\circ}$$

$$\left\{ \begin{array}{l} y + z = 180^\circ \end{array} \right.$$

$$\Rightarrow 60 + z = 180$$

$$\left\{ \begin{array}{l} \boxed{z = 120^\circ} \end{array} \right.$$

$$\left\{ \begin{array}{l} 45 + z + b = 180 \end{array} \right.$$

$$\Rightarrow b = 180 - 45 - 120$$

$$\left\{ \begin{array}{l} \boxed{b = 15^\circ} \end{array} \right.$$