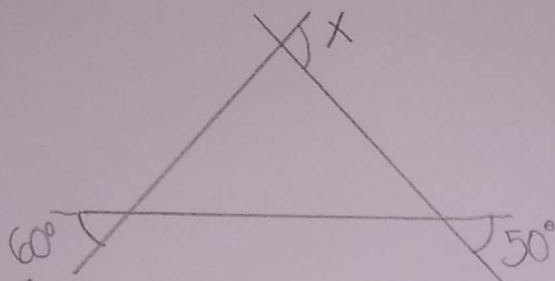


Nome: Gustavo da Silva de Souza. CTii 348.

Tarefa Básica - Triângulos

01. O Valor de x na figura é:



$$x = 60^\circ + 50^\circ$$

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

R: Letra (C) 110°

02. Os ângulos de um triângulo medem, respectivamente, $3x$, $4x$ e $5x$. Então x vale em graus:

$$3x + 4x + 5x = 180^\circ$$

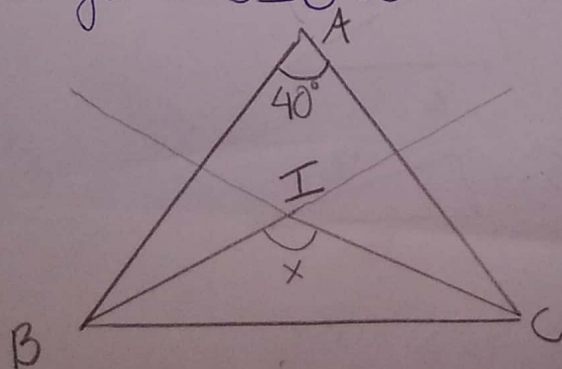
$$12x = 180^\circ$$

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

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

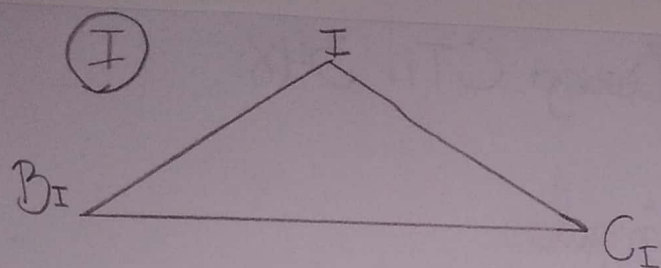
R: Letra (E) 15°

03. No triângulo ABC da figura abaixo, BI e CI são bissetrizes dos ângulos internos B e C, e a medida do ângulo A é 40° . A medida do ângulo BIC é:



$$B + C = 180 - 40$$

$$B + C = 140$$



$$I = 180 - (B_I + C_I)$$

$$B + C = (B_I + C_I) \div 2$$

$$140 = B_I + C_I \div 2$$

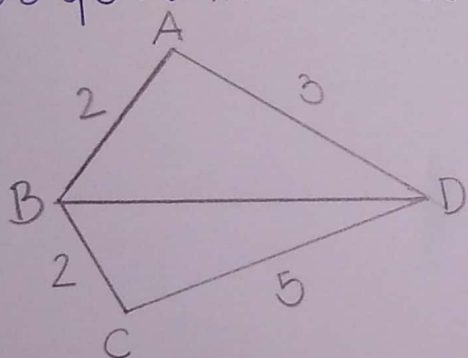
$$B_I + C_I = 70$$

$$I = 180 - (70)$$

$$I = \boxed{110^\circ}$$

R: Letra (D) 110° .

04. (MACKENZIE) - Se no quadrilátero ABCD da figura, a medida de BD for um número natural, então esse número será



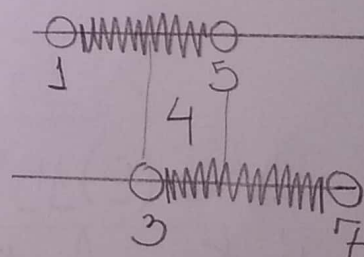
$$|2-3| < BD < 2+3$$

$$1 < BD < 5$$

$$|5-2| < BD < 5+2$$

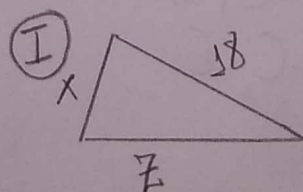
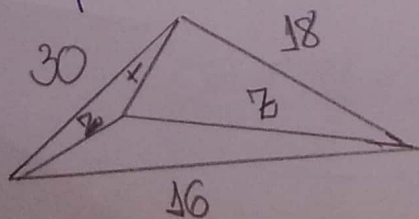
$$3 < BD < 7$$

$$BD = \boxed{4}$$

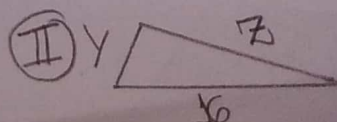


R: Letra (E) 4.

05. (MACKENZIE) - No triângulo da figura, a soma das medidas x , y e z pode ser

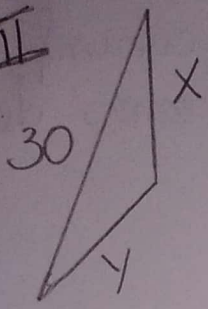


$$18 < x + z$$



$$16 < y + z$$

III



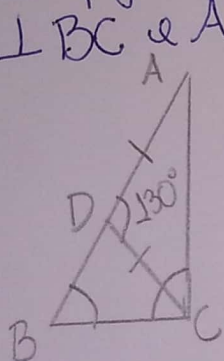
$$+ \begin{cases} 18 < X+Z \\ 16 < Y+Z \\ 30 < X+Y \end{cases}$$

$$64 < 2X+2Y+2Z (\div 2)$$

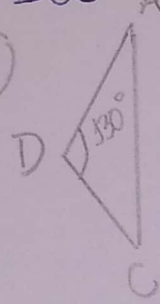
$$32 < X+Y+Z$$

R: Letra (E) 33.

06. Na figura abaixo, calcule os ângulos A, B e C, sendo $AD \cong CD$, $CD \perp BC$ e $\hat{ADC} = 130^\circ$



(I)



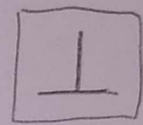
$$X+X+130=180$$

$$2X=180-130$$

$$2X=50$$

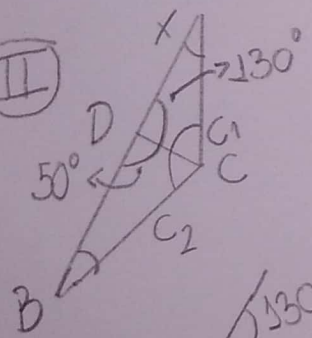
$$X=\frac{50}{2}$$

$$\boxed{X=25^\circ} (A)$$



↳ Perpendicular

(II)



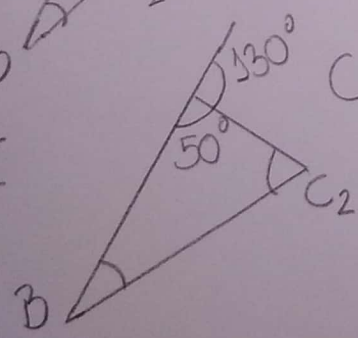
$$C_1=25^\circ \quad C_1+C_2=C$$

$$B+C_2=130$$

$$C_2=90^\circ$$

$$\underbrace{CD \perp CB}_{90^\circ}$$

III



$$B+C_2=130$$

$$B+90=130$$

$$B=130-90$$

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

$$C=C_1+C_2$$

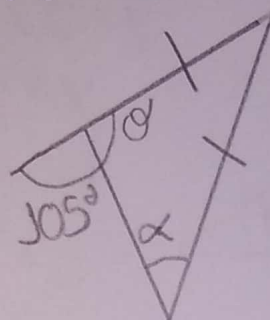
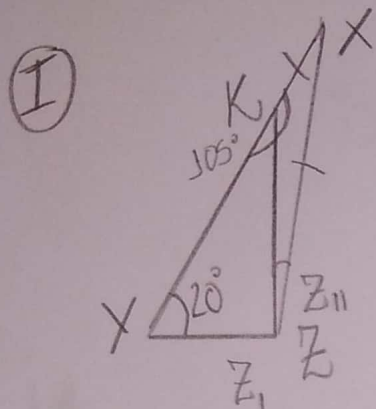
$$C=25+90$$

$$\boxed{C=115^\circ}$$

R: $25^\circ, 40^\circ, 115^\circ$

07. Calcular os ângulos X e Z do triângulo XYZ da figura, sendo $\hat{Y} = 20^\circ$,

$\hat{YKZ} = 105^\circ$ e $XZ \cong XK$



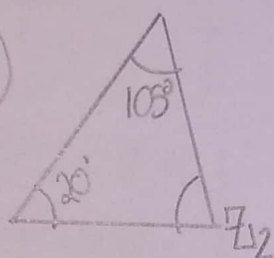
$$\alpha = \theta$$

$$\theta = 180^\circ - 105^\circ$$

$$\theta = 75^\circ$$

$$Z_1 = 75^\circ$$

(II)



$$105 + 20 + Z_2 = 180$$

$$Z_2 = 180 - 125$$

$$Z_2 = 55^\circ$$

$$X + Y + Z = 180$$

$$X + Z = 180 - 20$$

$$X + Z = 160$$

$$X + 130 = 160$$

$$X = 160 - 130$$

$$\boxed{X = 30^\circ}$$

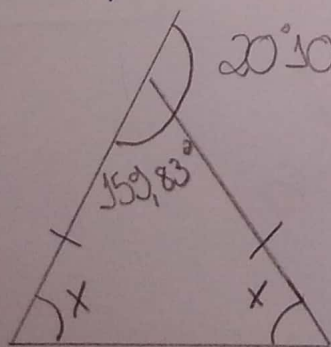
$$Z = Z_1 + Z_2$$

$$Z = 75^\circ + 55^\circ$$

$$\boxed{Z = 130^\circ}$$

R: 30° e 130° .

08. Num triângulo isósceles, um ângulo externo vale $20^\circ 10'$. Os valores possíveis para os ângulos congruentes são:



$$20^\circ 10' = 20,17^\circ$$

$$60^\circ \Rightarrow 1^\circ$$

$$10' \Rightarrow X$$

$$60X = 10$$

$$X = \frac{10}{60}$$

$$X = 0,17$$

$$180 - 20,17$$

$$159,83^\circ$$

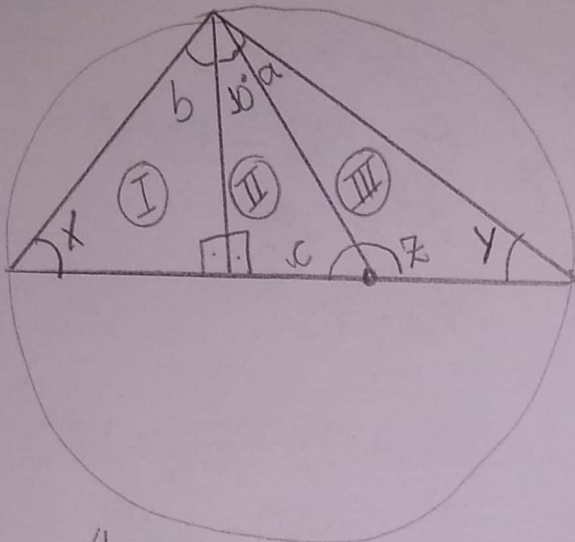
$$X + X + 159,83 = 180$$

$$2X = 20,17$$

$$X = 10,085$$

R: letra (B) Somete $10^\circ 05'$

09. Num triângulo retângulo, a altura relativa à hipotenusa forma com a bissetriz do ângulo reto um ângulo de 10° . Calcule os ângulos agudos do triângulo.



$$Z = 90^\circ \Rightarrow 180^\circ - 90^\circ = 90^\circ$$

$$X + Y = 90^\circ$$

$$b + a + 10 = 90^\circ$$

$$C + Z = 180^\circ$$

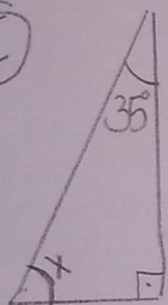
$$a = 45^\circ$$

$$b + 10 = 45^\circ$$

$$b = 45 - 10$$

$$b = 35^\circ$$

(I)

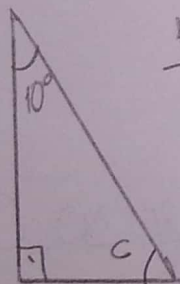


$$35 + 90 + X = 180$$

$$X = 180 - 90 - 35$$

$$X = 55^\circ$$

(II)

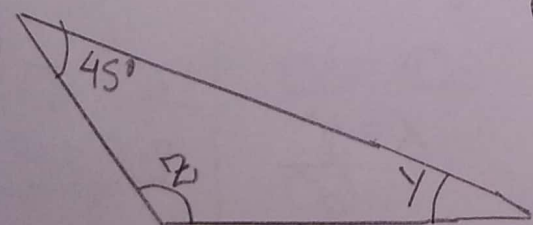


$$10 + 90 + C = 180$$

$$C = 180 - 90 - 10$$

$$C = 80^\circ$$

(III)



$$C + Z = 180^\circ \Rightarrow Z = 180 - 80 \Rightarrow Z = 100^\circ$$

$$45 + 100 + Y = 180^\circ$$

$$Y = 180 - 100 - 45$$

$$Y = 35^\circ$$

R: 35° e 55° .