Nome: Gustavo Murilo Cavalcante Carvalho

1- $Ex\alpha = \theta + \beta = 60 + 50 = x = 110°$ (C)

2- $3x + 4x + 5x = 180° = 12x$

$x = 180/12 = 15°$ (E)

3- $\hat{B} + \hat{C} = 180 - 40 = 140°$ $\xrightarrow{\text{Bissetrizes}}$ $140/2 = 70°$

$B\hat{I}C = 180 - 70 = 110°$ (D)

4- $ABD \rightarrow 3-2 < \overline{BD} < 3+2$ $\Big\{ 1 < \overline{BD} < 5$

$BCD \rightarrow 5-2 < \overline{BD} < 5+2$ $\Big\{ 3 < \overline{BD} < 7$

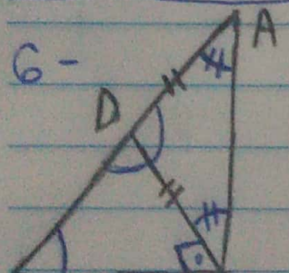
$3 < \overline{BD} < 5 \longrightarrow \overline{BD} = 4$ (E)

5-
$$\begin{aligned} x + y &> 30 \\ x + z &> 18 \\ y + z &> 16 \\ \hline 2x + 2y + 2z &> \end{aligned}$$

$\div 2 \rightarrow$ $x + y + z > 32$

33 (E)

6-



$B\hat{C}D = 90°$ $\longrightarrow$ pois $CD \perp BC$

$C\hat{D}B = 180 - 130 = 50°$

$D\hat{B}C = 180 - (90 + 50) = 180 - 140 = 40°$

$A\hat{D}C = 130°$

$180 - 130 = 50° = C\hat{A}D + D\hat{C}A$

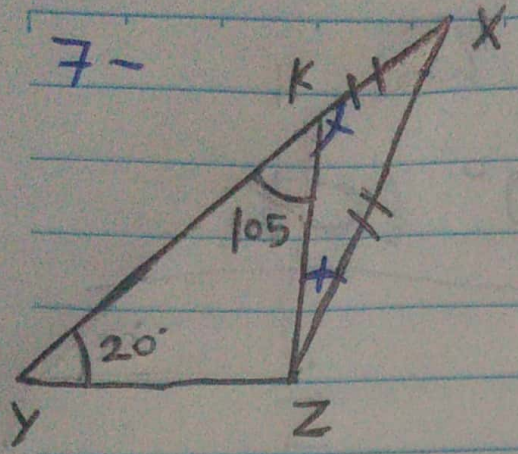
$D\hat{C}A \cong C\hat{A}D$ $\{$ $C\hat{A}D = 50/2 = 25°$

$A = 25°$

$B = 40°$

$C = 90 + 25 = 115°$

7-



$X\hat{K}Z = 180 - 105 = 75°$

$X\hat{K}Z = X\hat{Z}K = 75°$

$\hat{X} = 180 - (75+75)$

$\hat{X} = 30°$

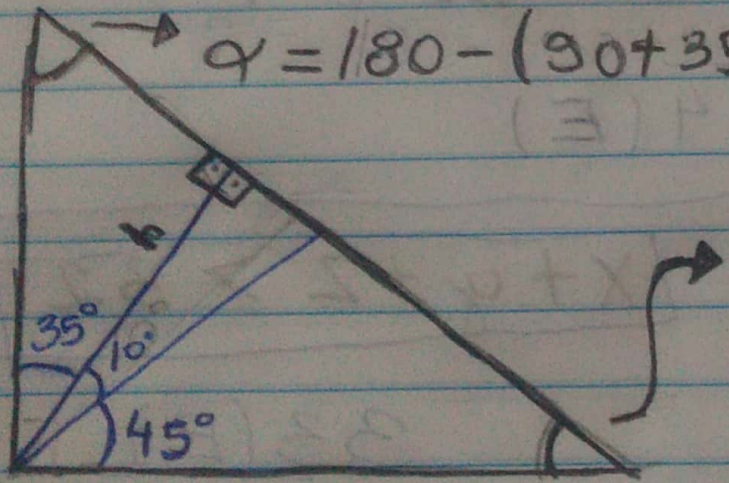
$\hat{Z} = 180 - (20+30) = 130°$

8- $180° = 179°60'$

$180 - Ex\ \alpha = \alpha \longrightarrow 179°60' - 20°10' = 159°50'$

Angulos congruos $= 20°10'/2 = 10°05'$, (B)

9-



$\alpha = 180 - (90+35) = 180 - 125 = 55°$

$\beta = 180 - (90 + (45+10))$

$\beta = 180 - 145$

$\beta = 35°$