Tarefa básica 2 - Triângulos

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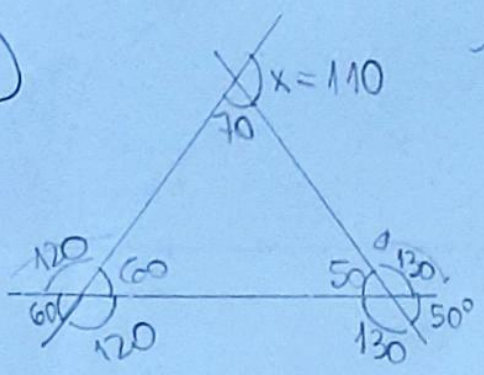
O valor de x na figura é:

(1)



Resp: 110 (C)

O ângulo externo é a soma dos dois ângulos internos não adjacentes

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(2) Os ângulos de um triângulo medem, respectivamente $3x, 4x, 5x$. Então x vale em graus:

$3x + 4x + 5x = 180° \Rightarrow 12x = 180 \Rightarrow x = 15°$

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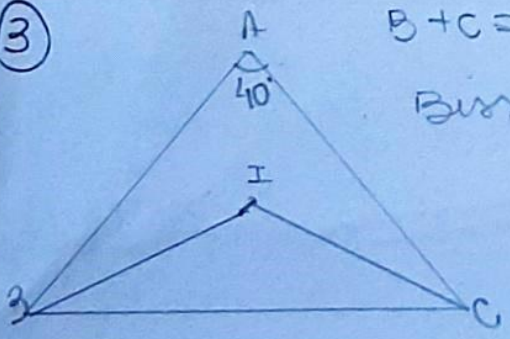
(3)



$B + C = 180 - 40 = 140°$

$\text{Bissetrizes} = \frac{B+C}{2} = \frac{140°}{2} = 70°$

$I + 70 = 180 \rightarrow I = 180 - 70 \rightarrow I = 110°$

Resp: D

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(4)

$\triangle ABD = 2+3 > x > 3-2$ (BD)

$\triangle BCD = 2+5 > x > 5-2$ (BD)

$5 > x > 1$

$7 > x > 3$ } = 4

Como cada lado deve ser menor que a soma e maior que a diferença dos outros dois lados:

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(5) Como um lado de um triângulo é sempre menor que a soma dos outros dois...

$30 < x + y$

$18 < x + y$

$16 < y + z$

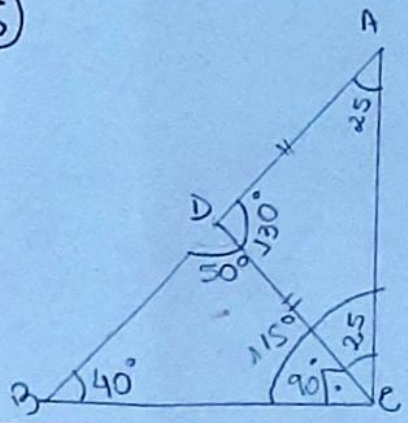
$\frac{64 < 2x + 2y + 2z}{2}$

$32 < x + y + z$

$x + y + z > 32$

Resp: 33 (E)

⑥



$ADC = 130°$
$DAC = 25°$
$ACD = 25°$
$BDC = 50°$
$DBC = 40°$
$DCB = 90°$
$ACB = 115$

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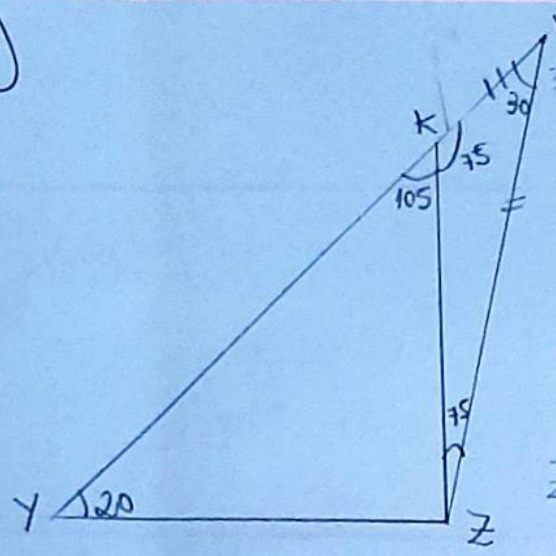
⑦



$Z + 20 + 30 = 180$
$Z = 180 - 20 - 30$
$Z = 130$

$X = 30$
$Y = 20$
$Z = 130$

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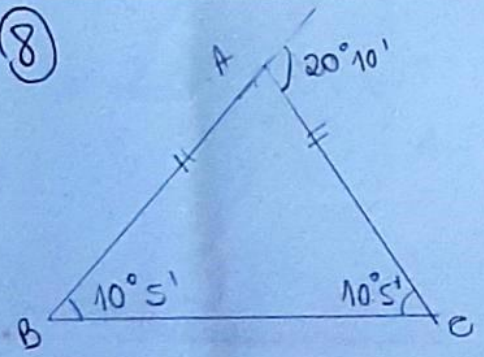
⑧



$A + 2B = 180°$ (ângulo côngruo = B)

Em um triângulo isósceles, o ângulo externo é igual a soma dos ângulos internos não adjacentes

Resp: 10° 5' (B)

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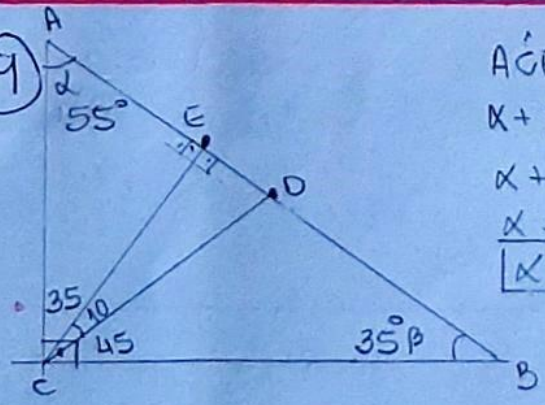
⑨



$A\hat{C}E = 45 - 10 = 35$
$\alpha + 35 + 90 = 180$
$\alpha + 125 = 180$
$\alpha = 180 - 125$
$\boxed{\alpha = 55°}$

$\alpha + \beta + 90 = 180$
$55 + \beta + 90 = 180$
$\beta = 180 - 145$
$\boxed{\beta = 35°}$