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CORDILLO**

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ESTÁTICA PARA LA ARQUITECTURA

EXÁMEN 2U

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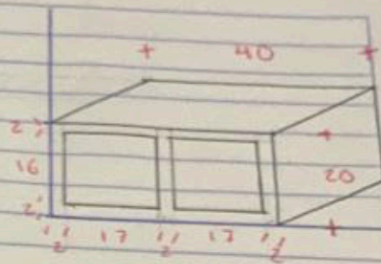
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$$X = \frac{\sum y A}{\sum A}$$

$$CEY = A_1 \cdot y_1 + A_2 \cdot y_2 + A_3 \cdot y_3 + \dots$$
$$A_1 + A_2 + A_3 + \dots$$

$$Y = \frac{\sum x A}{\sum A}$$

$$CEX = A_1 \cdot x_1 + A_2 \cdot x_2 + A_3 \cdot x_3 + \dots$$
$$A_1 + A_2 + A_3 + \dots$$



1. $A_1 = b \cdot h = 40 \text{ cm} (20 \text{ cm}) = 800 \text{ cm}^2$

$$y_1 = b/2 = 40 \text{ cm} / 2 = 20 \text{ cm}$$

$$y_1 = h/2 = 20 \text{ cm} / 2 = 10 \text{ cm}$$

2. $A_2 = b \cdot h = 17 \text{ cm} (16 \text{ cm}) = 272 \text{ cm}^2$

$$y_2 = b/2 = 17 \text{ cm} / 2 = 8.5 + 2 = 10.5 \text{ cm}$$

$$y_2 = h/2 = 16 \text{ cm} / 2 = 8 \text{ cm} + 2 = 10 \text{ cm}$$

3. $A_3 = b \cdot h = 17 \text{ cm} (16 \text{ cm}) = 272 \text{ cm}^2$

$$y_3 = b/2 = 17 / 2 = 8.5 + 2 = 10.5 \text{ cm}$$

$$y_3 = h/2 = 16 / 2 = 8 + 2 = 10 \text{ cm}$$

$$A_{fc} = 800 \text{ cm}^2 - 272 \text{ cm}^2 - 272 \text{ cm}^2 = 256 \text{ cm}^2$$

$$C_{gx} = \frac{800 \text{ cm}^2 (20) - 272 (105) - 272 (79.5)}{800 - 272 - 272}$$

$$\frac{5120}{256} = 20 \text{ cm}$$

$$C_{gy} = \frac{800 (10) - 272 (10) - 272 (10)}{800 - 272 - 272}$$

$$\frac{2560}{256} = 10 \text{ cm}$$