

EXERCÍCIO



σ_A e σ_B ?



(A)

• $V = P$

• $I_z = \frac{b h^3}{36}$

• $b_A = \frac{2b}{3}$

• $S_A = \frac{2h}{3} \cdot \frac{2b}{3} \cdot \frac{1}{2} \cdot \frac{1}{3} h = \frac{4bh^2}{81}$

(B)

• $V = P$

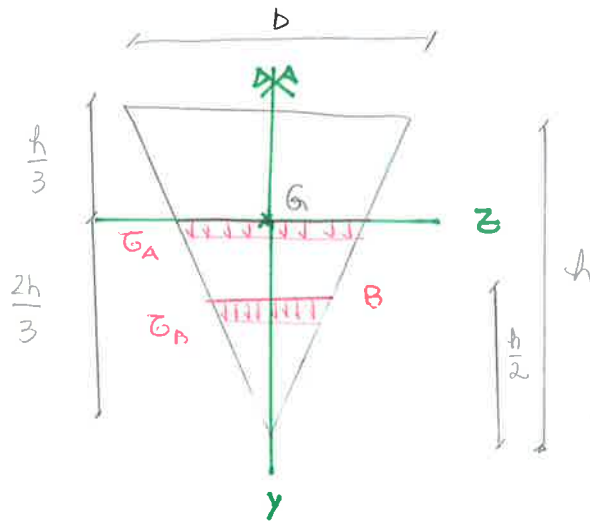
• $I_z = bh^3/36$

• $b_B = \frac{b}{2}$

• $S_B = \frac{b}{2} \cdot \frac{h}{2} \cdot \frac{1}{2} \cdot \frac{h}{3} = \frac{bh^2}{24}$

$$\sigma_B = \frac{P \cdot \cancel{bh^3}/24}{b/2 \cdot \cancel{bh^3}/36} = \frac{P}{\cancel{24} \cdot \cancel{12}} \cdot \frac{\cancel{36}}{b \cdot h} = 3 \cdot \frac{P}{b \cdot h}$$

$$\bar{\sigma} = \frac{P}{\frac{1}{2} \cdot b h} = \frac{2P}{bh}$$



$$I_z = \frac{bh^3}{36}$$

$$\bar{\sigma} = \frac{V}{A} = \frac{2P}{bh}$$

$$\sigma_A = \alpha \cdot \bar{\sigma}$$

$$\sigma_B = \beta \cdot \bar{\sigma}$$

$$\sigma = P \cdot \frac{1}{81} \cdot \frac{1}{2b} \cdot \frac{36}{bh^2}$$

$$\sigma = \frac{P}{bh} \cdot \frac{8}{3}$$

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$$\frac{h}{2} \cdot \frac{1}{3} + \left(\frac{2h}{3} - \frac{h}{2} \right)$$

$$= \frac{h}{6} + \frac{4h - 3h}{6} = \frac{2h}{6} = \frac{h}{3}$$

$$\sigma_A = \frac{4}{3} \bar{\sigma} \quad \sigma_B = \frac{3}{2} \bar{\sigma}$$