

$$\sigma_{r,c} = 3 \text{ kN/cm}^2$$

$$\sigma_{e,t} = 50 \text{ kN/cm}^2$$

$$\gamma_c = 2,5$$

$$\gamma_a = 2,0$$

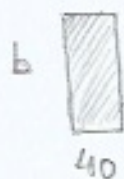
a)

CARGA NO PILAR, (POR PAVIMENTO): $4 \times 180 = 720 \text{ kN}$

i) " " " (TERRENO - PAV 1): $6 \times 720 = 4320 \text{ kN}$

ii) " " " (PAV 5 - COB): $1 \times 720 = 720 \text{ kN}$

i)



$$\sigma_{\text{PILAR}} = \frac{4320}{40 \cdot b} = \frac{108}{b}$$

$$\sigma_{\text{ADM},c} = \frac{3}{2,5} = 1,2 \text{ kN/cm}^2$$

$$\text{ASSIM: } 108/b \leq 1,2$$

$$b \geq 90 \text{ cm} // \rightarrow \boxed{b = 90 \text{ cm}}$$

ii)

$$\sigma_{\text{PILAR}} = \frac{720}{40 \cdot b} = \frac{18}{b}$$

$$\sigma_{\text{ADM},c} = 1,2 \text{ kN/cm}^2$$

$$\text{ASSIM: } 18/b \leq 1,2$$

$$b \geq 15 \text{ cm} // \rightarrow \boxed{b = 15 \text{ cm}}$$

b)

$$A_{\text{dzo}} = \frac{\pi d^2}{4} = \frac{\pi \times 2^2}{4} = 3,14 \text{ cm}^2$$

$$A_{\text{TOTAL}} = n \times 3,14 = 3,14 n$$

$$\sigma_{\text{RAPRAS}} = \frac{250}{3,14 n} = \frac{79,6}{n} \text{ uN/cm}^2$$

$$\sigma_{\text{ADM,t}} = \frac{50}{2} = 25 \text{ uN/cm}^2$$

ASSIM: $79,6 n \leq 25$

$$n \geq 3,2 \rightarrow \boxed{n=4}$$