

Str. 49 / úloha 252,

Matematika

$$p = ? \text{ [Pa]}$$

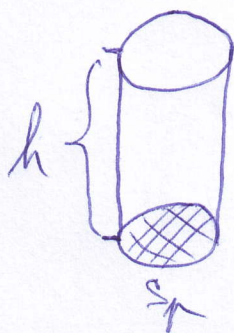
$$d = 0,8 \text{ m}$$

$$h = 2 \text{ m}$$

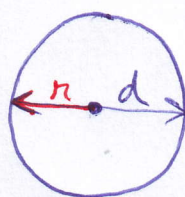
$$\rho = 2200 \frac{\text{kg}}{\text{m}^3}$$

$$g = 10 \frac{\text{N}}{\text{kg}}$$

$$\pi = 3,14$$



← podstava (kružnice)



$$r = \frac{d}{2}$$

$$S_p = \pi \cdot r^2$$

$$p = \frac{F}{S_p}$$

$$p = \frac{22000}{0,5}$$

$$p = 44000 \text{ Pa}$$

$$p = 44 \text{ kPa}$$

Betonový válec působí  
tlakem o velikosti  
44 kPa.

$$F = m \cdot g$$

$$F = 2200 \cdot 10$$

$$F = 22000 \text{ N}$$

$$m = \rho \cdot V$$

$$m = 2200 \cdot 1$$

$$m = 2200 \text{ kg}$$

$$V = S_p \cdot h$$

$$V = 0,5 \cdot 2$$

$$V = 1 \text{ m}^3$$

$$S_p = \pi \cdot r^2$$

$$S_p = 3,14 \cdot 0,4^2$$

$$S_p = 0,5 \text{ m}^2$$

$$r = \frac{d}{2} = \frac{0,8}{2} = 0,4 \text{ m}$$