

Str. 68 / úloha 349,

$$a = 5 \text{ cm} = 0,05 \text{ m}$$

$$b = 4 \text{ cm} = 0,04 \text{ m}$$

$$c = 10 \text{ cm} = 0,1 \text{ m}$$

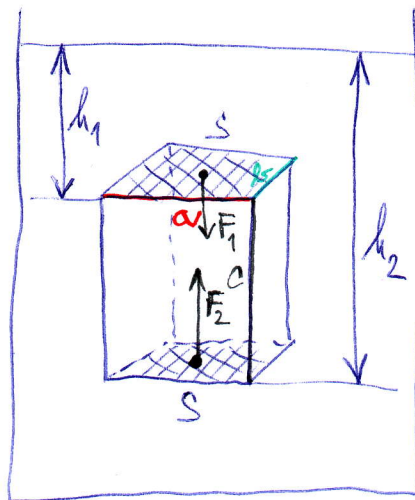
$$h_1 = 6 \text{ cm} = 0,06 \text{ m}$$

$$F_{vz} = ? \text{ [N]}$$

$$\rho = 1000 \frac{\text{kg}}{\text{m}^3}$$

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

$$p_h = \frac{F}{S}$$
$$p_h = h \cdot \rho \cdot g$$



$$h_2 = h_1 + c$$

$$h_2 = 6 + 10$$

$$h_2 = 16 \text{ cm} = 0,16 \text{ m}$$

1.

$$F_{vz} = F_2 - F_1$$

$$F_{vz} = 3,2 - 1,2$$

$$F_{vz} = 2 \text{ N}$$

2.

$$F_2 = p_{h_2} \cdot S$$

$$F_2 = 1600 \cdot 0,002$$

$$F_2 = 3,2 \text{ N}$$

3.

$$p_{h_2} = h_2 \cdot \rho \cdot g$$

$$p_{h_2} = 0,16 \cdot 1000 \cdot 10$$

$$p_{h_2} = 1600 \text{ Pa}$$

4.

$$S = a \cdot b$$

$$S = 0,05 \cdot 0,04$$

$$S = 0,002 \text{ m}^2$$

5.

$$F_1 = p_{h_1} \cdot S$$

$$F_1 = 600 \cdot 0,002$$

$$F_1 = 1,2 \text{ N}$$

6.

$$p_{h_1} = h_1 \cdot \rho \cdot g$$

$$p_{h_1} = 0,06 \cdot 1000 \cdot 10$$

$$p_{h_1} = 600 \text{ Pa}$$

Rozdil tlakových sil vody je 2 N.