

$$r = 7,5 \text{ cm}$$

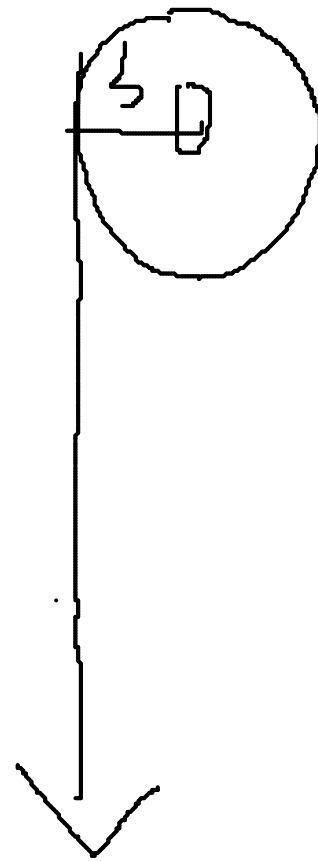
$$m = 83 \text{ Kg}$$

$$M = ?$$

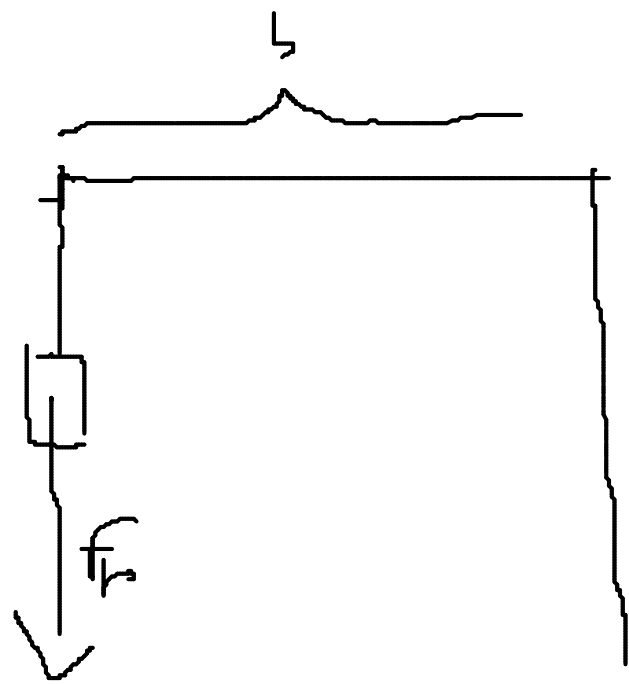
$$r = 7,5 \text{ cm} = 0,075 \text{ m}$$

$$F_p = mg = 83 \text{ kg} \cdot 9,8 \frac{\text{N}}{\text{kg}} = 813 \text{ N}$$

$$M = F \cdot l = 813 \text{ N} \cdot 0,673 \text{ m} = 61 \text{ N} \cdot \text{m}$$



$$\begin{aligned}
 b &= 23 \text{ m} \\
 m_c &= 50 \text{ kg} \\
 m_z &= 340 \text{ kg} \\
 F_{k_1} &= ?
 \end{aligned}$$



$$F_{k_1} = m g = 50 \text{ kg} \cdot 9,8 \frac{\text{N}}{\text{kg}} = 490 \text{ N}$$

$$F_{k_2} = m g = 340 \text{ kg} \cdot 9,8 \frac{\text{N}}{\text{kg}} = 3332 \text{ N}$$

$$F_{k_1} = 490 \text{ N} + 3332 \text{ N} = 3,8 \cdot 10^3 \text{ N}$$

$$M = F \cdot b = 3,8 \cdot 10^3 \text{ N} \cdot 23 \text{ m} = 8,7 \cdot 10^4 \text{ N} \cdot \text{m}$$

$$M_2 = 72 \cdot 10^3 \text{ N} \cdot \text{m}$$

$$b_2 = ?$$

$$b_2 = \frac{M_2}{F} = \frac{72 \cdot 10^3 \text{ N} \cdot \text{m}}{3,8 \cdot 10^3 \text{ N}} \approx 19 \text{ m}$$

$$d = 80 \text{ cm}$$

$$m = 31 \text{ kg}$$

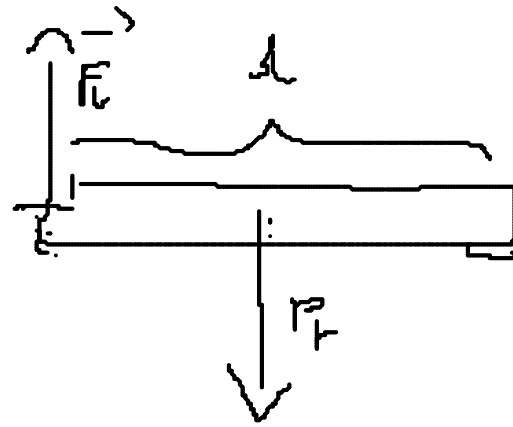
$$F_p = ?$$

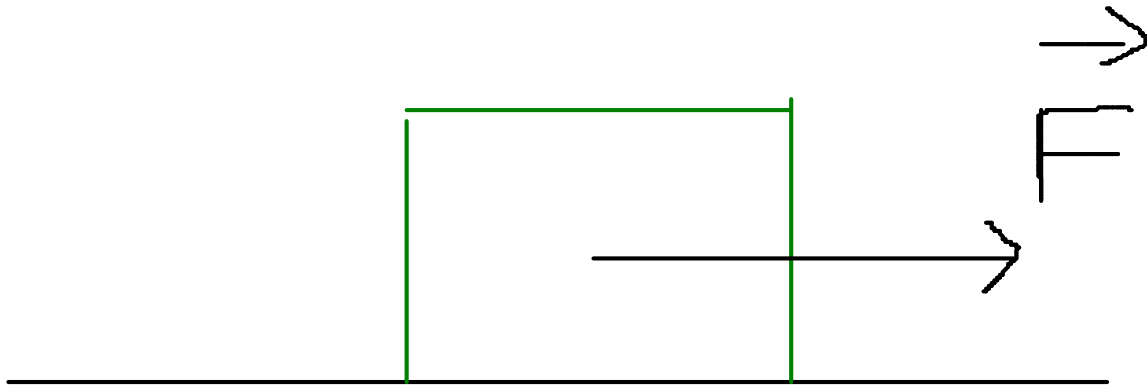
$$F_p = mg = 31 \text{ kg} \cdot 9,8 \frac{\text{N}}{\text{kg}} \equiv 300 \text{ N}$$

$$b_1 = \frac{80 \text{ cm}}{2} = 40 \text{ cm} = 0,4 \text{ m}$$

$$M = F \cdot b_1 = 300 \text{ N} \cdot 0,4 \text{ m} = 120 \text{ N} \cdot \text{m}$$

$$F_v = \frac{M}{d} = \frac{120 \text{ N} \cdot \text{m}}{0,8 \text{ m}} = 150 \text{ N}$$

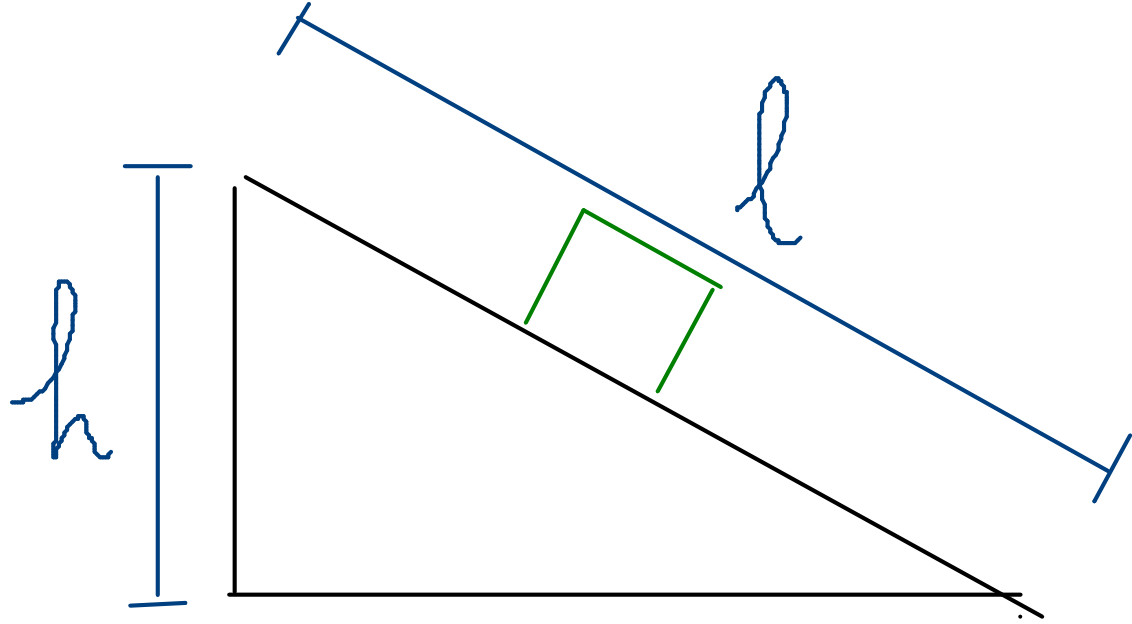




$$\mu_s = 0,70$$

$$m = 80 \text{ Kg}$$

$$F = ?$$



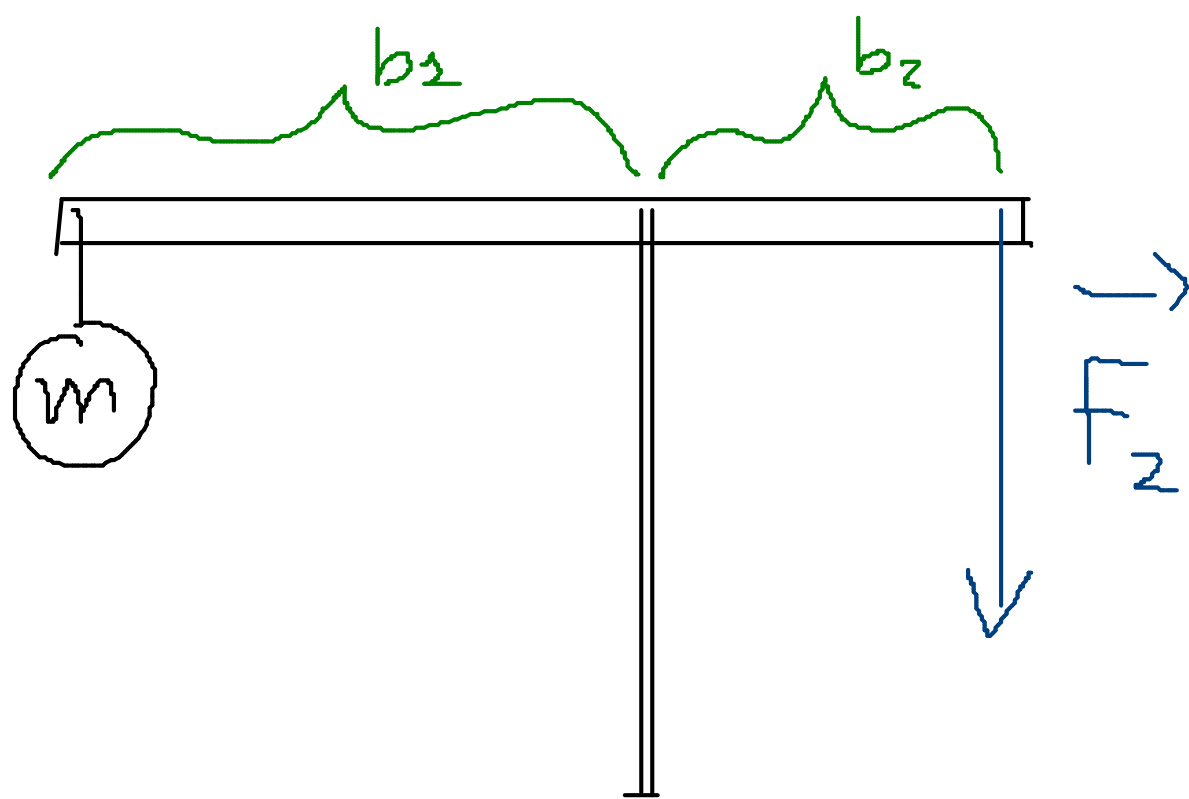
Equilibrio?

$$\mu_s = 0,85$$

$$h = 10 \text{ m}$$

$$l = 100 \text{ m}$$

$$m = 5,0 \text{ Kg}$$



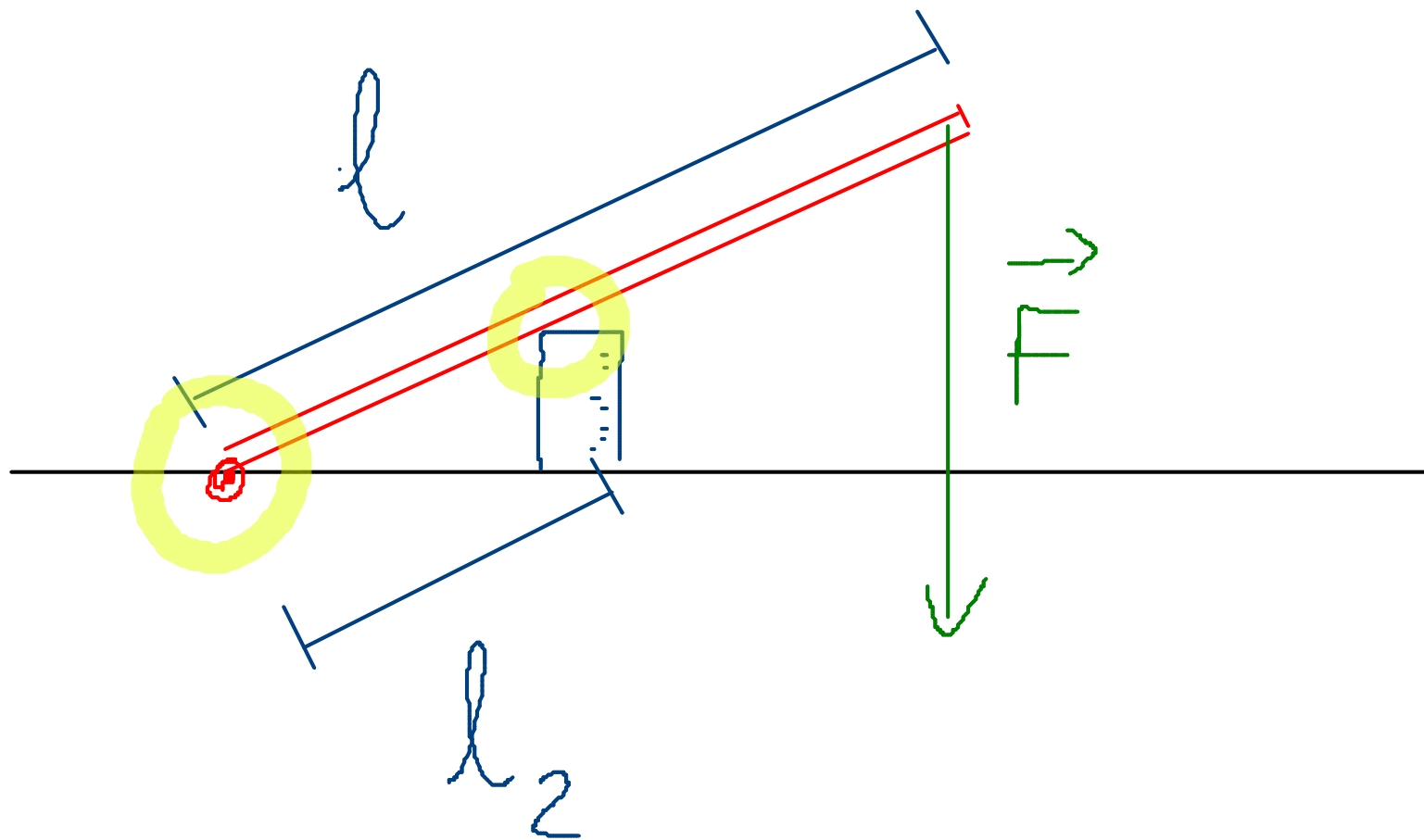
Equilibrio

$$F_2 = 150 \text{ N}$$

$$m = ?$$

$$b_1 = 20 \text{ cm}$$

$$b_2 = 80 \text{ cm}$$



$$F = 30 \text{ N}$$

$$l = 40 \text{ cm}$$

$$F_2 = 70 \text{ N}$$

$$l_2 = ?$$