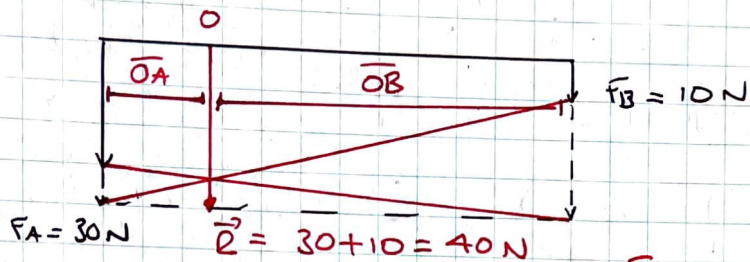


①

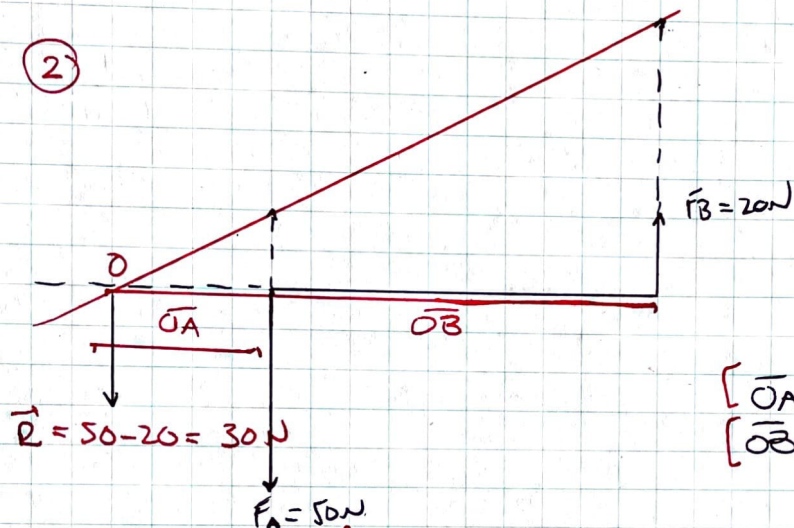
Activitats pres paral·leles



$$\begin{aligned} \vec{F}_A \cdot \vec{OA} &= \vec{F}_B \cdot \vec{OB} \\ 30 \cdot x &= 10(60 - x) \\ 30x &= 600 - 10x \\ 40x &= 600 \\ x &= \frac{600}{40} = 15 \text{ cm} \end{aligned}$$

$$\begin{cases} \vec{OA} = x = 15 \text{ cm} \\ \vec{OB} = 60 - x = 45 \text{ cm} \end{cases}$$

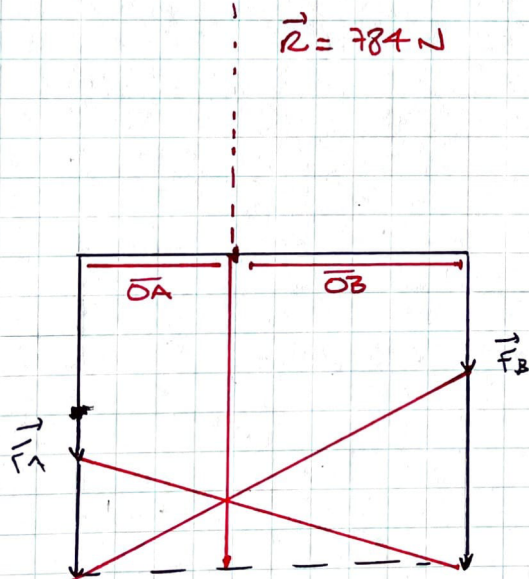
②



$$\begin{aligned} \vec{F}_A \cdot \vec{OA} &= \vec{F}_B \cdot \vec{OB} \\ 50 \cdot x &= 20(50 + x) \\ 50x &= 1000 + 20x \\ 30x &= 1000 \\ x &= \frac{1000}{30} = 33,3 \text{ cm} \end{aligned}$$

$$\begin{cases} \vec{OA} = x = 33,3 \text{ cm} \\ \vec{OB} = 60 + 33,3 = 93,3 \text{ cm} \end{cases}$$

③



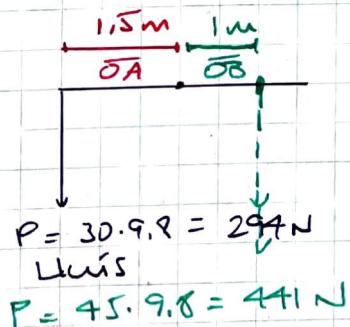
$$\begin{aligned} \vec{F}_{\text{pes}} &= m \cdot g = 20 \cdot 9,8 = 784 \text{ N} \\ \vec{F}_B &= 30 \cdot 9,8 = 294 \text{ N} \end{aligned}$$

$$\begin{aligned} \vec{R} &= \vec{F}_A + \vec{F}_B \\ 784 &= \vec{F}_A + 294 \\ \vec{F}_A &= 784 - 294 = 490 \text{ N} \end{aligned}$$

$$\begin{aligned} \vec{F}_A \cdot \vec{OA} &= \vec{F}_B \cdot \vec{OB} \\ 490 \cdot x &= 294 \cdot (2 - x) \\ 490x &= 588 - 294x \\ 784x &= 588 \\ x &= \frac{588}{784} = 0,75 \text{ m} \end{aligned}$$

$$\begin{cases} \vec{OA} = x = 0,75 \text{ m} \\ \vec{OB} = 2 - x = 1,25 \text{ m} \end{cases}$$

④



$$\begin{aligned} \vec{F}_A \cdot \vec{OA} &= \vec{F}_B \cdot \vec{OB} \\ 294 \cdot 1,5 &= 441 \cdot x \\ x &= \frac{441}{294} = 1 \text{ m} \end{aligned}$$

A 1 m del punt d'aplicació
A 0,5 m de l'altre extrem