

NOMBRE:

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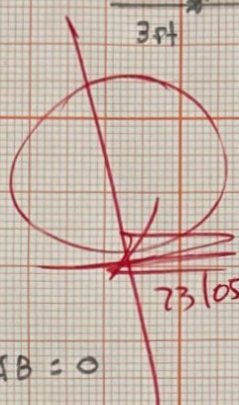
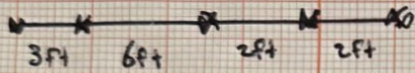
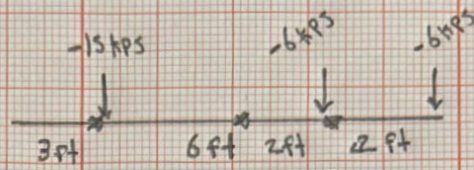
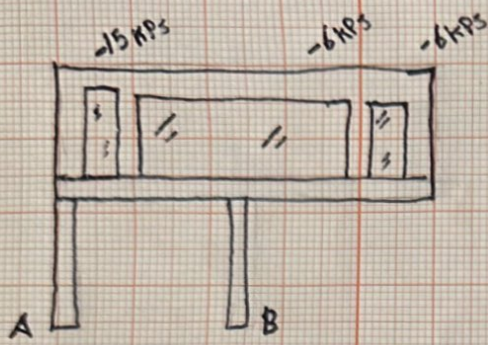
Estatica

CUATRIMESTRE:

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FECHA:

26/05/2024



$$\sum F_y = 0$$

$$AA - 15 \text{ kips} - 6 \text{ kips} - 6 \text{ kips} + AB = 0$$

$$AA + AB = 27 \text{ kips}$$

$$\sum M_{AA} = 0$$

$$= (-15 \text{ kips} \cdot 3 \text{ ft}) + (AB \cdot 9 \text{ ft}) + (-6 \text{ kips} \cdot 11 \text{ ft}) + (-6 \text{ kips} \cdot 13 \text{ ft})$$

$$(-45) + (AB \cdot 9 \text{ ft}) + (-66) + (-78)$$

$$-189 + (AB \cdot 9 \text{ ft})$$

$$AB = \frac{189 \text{ kips} \cdot \cancel{\text{ft}}}{9 \cancel{\text{ft}}} = 21 \text{ kips}$$

$$AA + 21 \text{ kips} = 27 \text{ kips}$$

$$AA = 27 \text{ kips} - 21 \text{ kips}$$

$$AA = 6 \text{ kips}$$

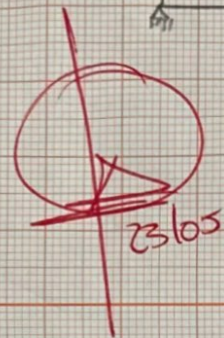
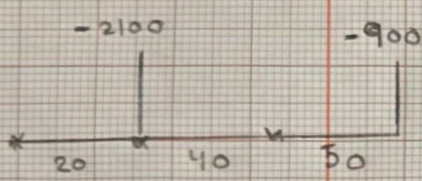
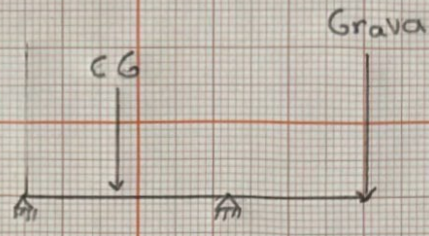
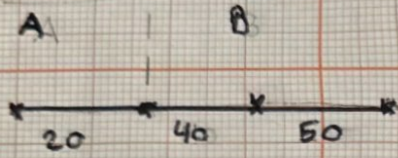
$$\sum F_x = 0$$

$$= 6 \text{ kips} - 15 \text{ kips} - 6 \text{ kips} - 6 \text{ kips} + 21 \text{ kips} = 0$$

$$= 27 \text{ kips} - 27 \text{ kips} = 0$$



Un tractor de 2100 libras se utiliza para levantar 900 libras de grava determine la relación entre la llanta trasera A y la llanta delantera B



$$1) \quad \sum M_A = -2100lb \cdot 20" + APB \cdot 60" - 900lb \cdot 50" = 0$$

$$APB + APB = +3000 \text{ lb}$$

$$2) \quad = (-2100lb \cdot 20") + (APB \cdot 60") + (-900lb \cdot 50")$$

$$= (-42000 \text{ lb}/\text{in}) + (APB \cdot 60") + (-45000 \text{ lb}/\text{in})$$

$$= (-91000 \text{ lb}/\text{in}) + APB \cdot 60"$$

$$= APB = \frac{91000 \text{ lb}/\text{in}}{60"} = 2350 \text{ lb}$$

$$\frac{2350 \text{ lb}}{2} = 1175 \text{ lb}$$

$$3) \quad \sum F_y = APB + APB = 3000 \text{ lb}$$

$$APB + (2350 \text{ lb}) = 3000$$

$$APB = 3000 \text{ lb} - 2350 \text{ lb}$$

$$APB = 650 \text{ lb}$$

$$\frac{650 \text{ lb}}{2} = 325 \text{ lb}$$

$$4) \quad =$$

$$650 \text{ lb} - 2100 \text{ lb} + 2350 \text{ lb} + 900 \text{ lb} = 0$$

$$3000 \text{ lb} - 3000 \text{ lb} = 0$$