



Nestor Iván Guillen Velasco

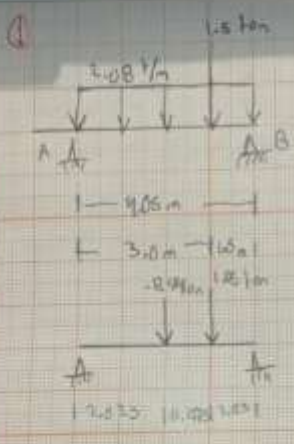
Arq. Pedro

Arquitectura

Estatica

Tercer cuatrimestre

09/07/2023



$P = w \cdot L$
 $0.5 = 2/4$



$P = 2.08 \cdot 2 = 4.16 \text{ kN}$

$w = 2.08 \text{ kN/m}$

$\sum M_A = (-2.08 \cdot 2 \cdot 2.05) - (2.08 \cdot 3) + (R_B \cdot 4.05) = 0$
 $\sum M_A = -17.058 \text{ kNm} - 6.24 \text{ kNm} + R_B \cdot 4.05 = 0$
 $\sum M_A = -23.298 \text{ kNm} + R_B \cdot 4.05 = 0$

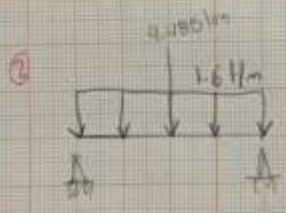
$R_B = \frac{23.298 \text{ kNm}}{4.05 \text{ m}} = 4.985 \text{ kN}$

$\sum F_x = 0$

$R_A + 8.16 \text{ kN} - 4.05 \text{ kN} + 4.985 \text{ kN} = 0$

$R_A + 8.985 \text{ kN} = 0$

$R_A = -4.985 \text{ kN}$



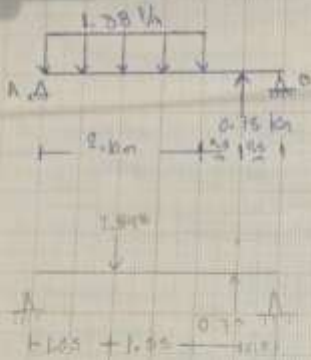
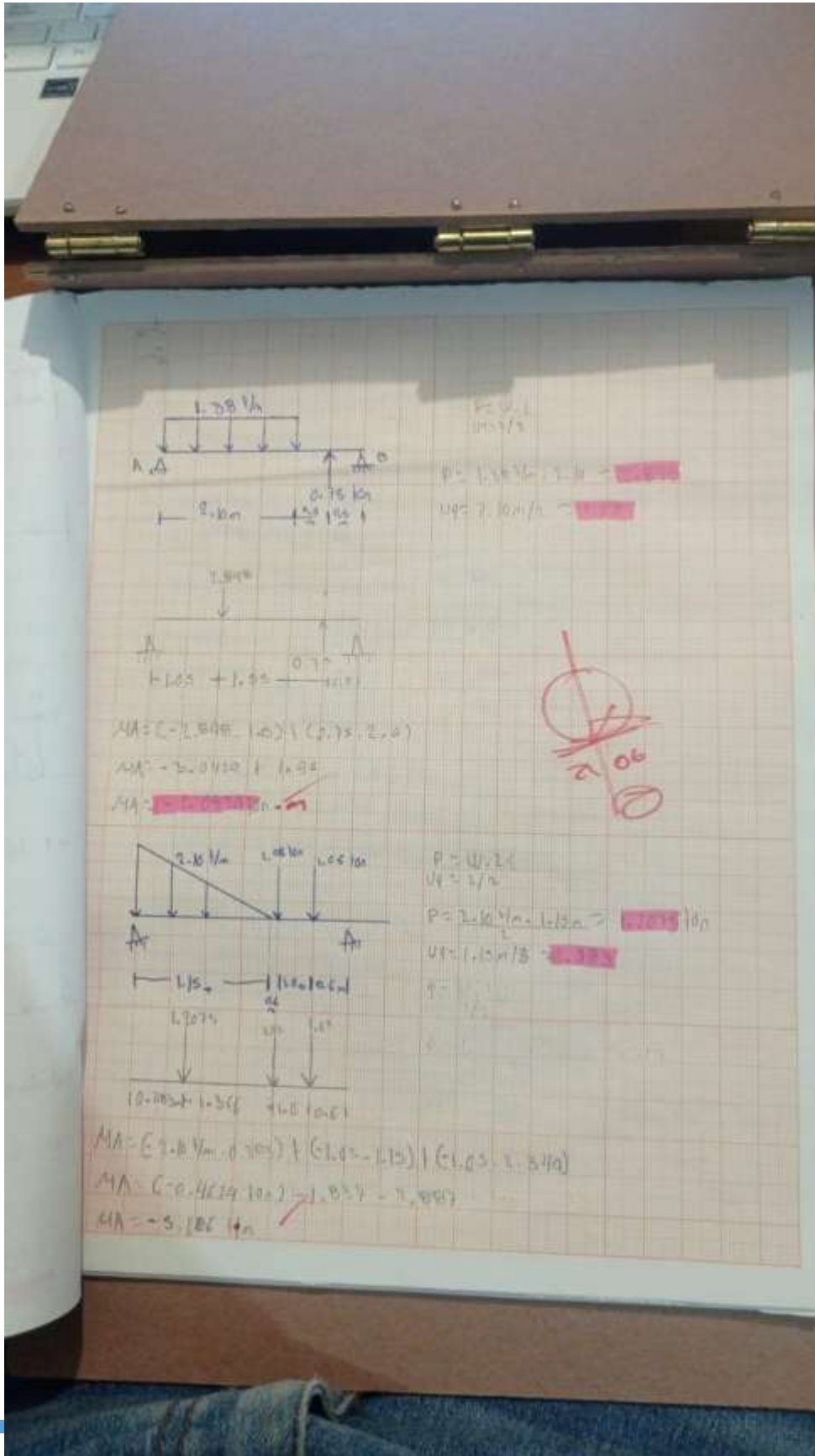
$R_A = -8.937 + 4.452$

$R_A = -4.485$

$\sum M_A = (-2.45 \cdot 2.1) + (R_B \cdot 4.2)$

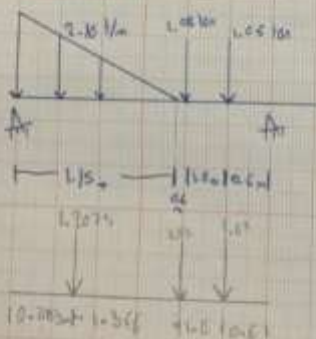
$\sum M_A = -10.245 + R_B \cdot 4.2$

$\sum M_A = R_B = \frac{10.245}{4.2} = 4.452$



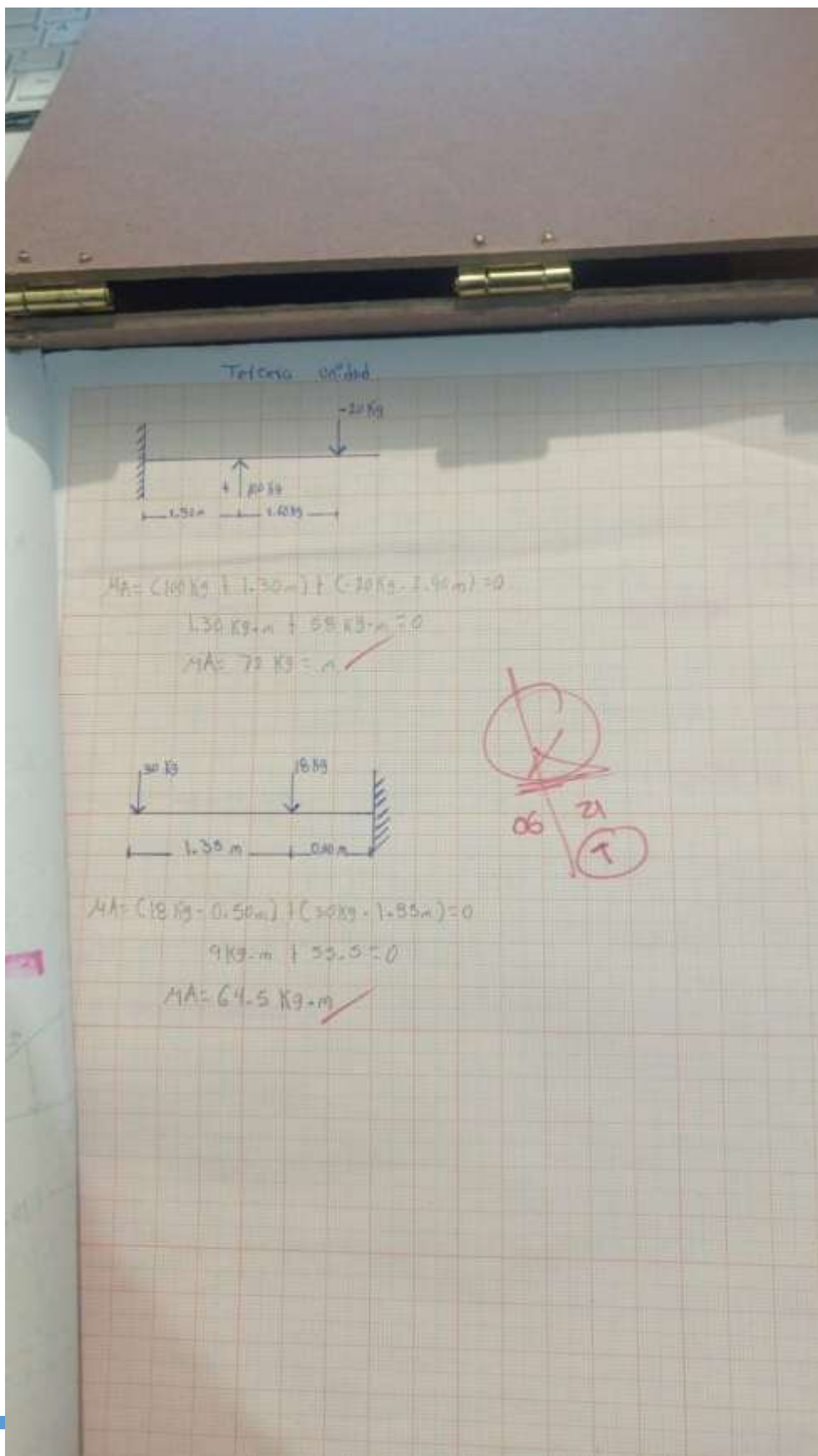
$P = 1.38 \text{ kN} \cdot 2.0 = 2.76$
 $U = 2.76 / 2 = 1.38$

$\sum M_A = (-1.38 \cdot 1.0) + (0.75 \cdot 2.0)$
 $\sum M_A = -1.38 + 1.50$
 $\sum M_A = 0.12 \text{ kN} \cdot \text{m}$



$P = \frac{W \cdot L}{2}$
 $U = \frac{L}{3}$
 $P = \frac{2.0 \cdot 1.5}{2} = 1.5 \text{ kN}$
 $U = \frac{1.5 \cdot 1}{3} = 0.5$

$\sum M_A = (-2.0 \cdot 1.5 \cdot 0.75) + (1.07 \cdot 1.5) + (1.0 \cdot 2.0)$
 $\sum M_A = (-2.25) + 1.605 + 2.0$
 $\sum M_A = 1.355 \text{ kN} \cdot \text{m}$



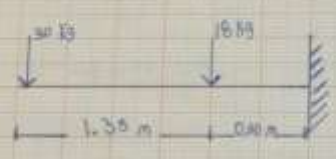
Tercera unidad



$$MA = (20 \text{ kg} \cdot 1.30 \text{ m}) + (-20 \text{ kg} \cdot 2.60 \text{ m}) = 0$$

$$1.30 \text{ kg} \cdot \text{m} + 52 \text{ kg} \cdot \text{m} = 0$$

$$MA = 73 \text{ kg} = \text{m}$$



$$MA = (18 \text{ kg} \cdot 0.50 \text{ m}) + (30 \text{ kg} \cdot 1.85 \text{ m}) = 0$$

$$9 \text{ kg} \cdot \text{m} + 55.5 = 0$$

$$MA = 64.5 \text{ kg} \cdot \text{m}$$

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