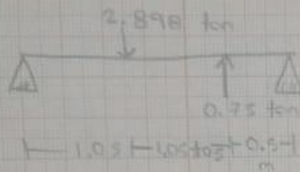
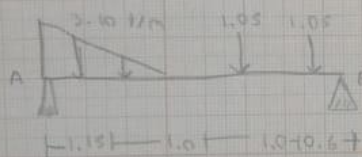


P. w. c  
 $W = L/2$   
 $P = 1.38 \cdot 2.10 \text{ m}$   
 $P = 2.898 \text{ ton}$   
 $W = 2.10/2 = 1.05 \text{ m}$



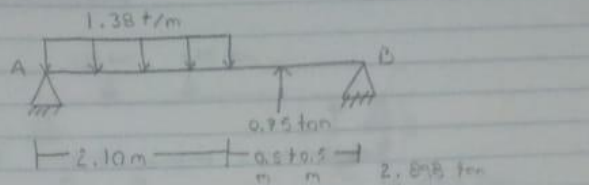
$M_A = (2.898 \text{ m} \cdot 1.05) + (0.75 \cdot 2.6)$   
 $3.092 - 1.95 = 1.142$



$P = 4 \cdot L/2$   
 $P = \frac{2.10 \cdot 1/m \cdot 1.5}{2} = 2.915$

$M_A = - (1.207 + 0.383) - (1.05 \cdot 1.15) - (1.05 \cdot 2.25)$   
 $- 0.462 - 1.637 = -2.88$

$M_A = -2.88 \text{ t.m}$



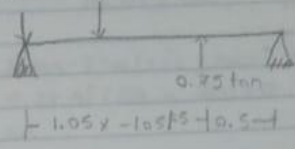
$$P = w \cdot L$$

$$UP = L/2$$

$$P = 1.38 \cdot 2.10 \text{ m}$$

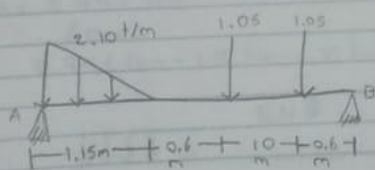
$$P = 2.898 \text{ ton}$$

$$UP = 2.10 / 2 = 1.05 \text{ m}$$



$$MA = (2.898 \text{ m} \cdot 1.05) + (0.75 \cdot 2.6)$$

$$3.072 - 1.95 = 1.072 \text{ t.m}$$



$$UP = 1/3 (90^\circ)$$

$$UP = 1.15 \text{ m} / 3 =$$

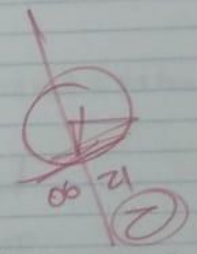
$$P = wL/2$$

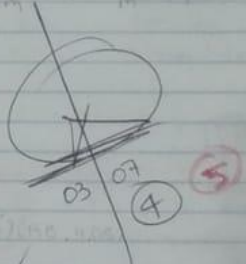
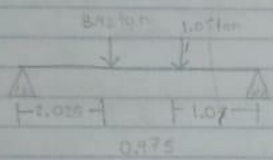
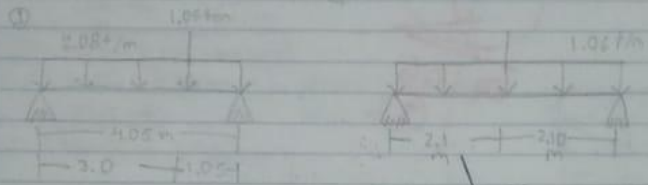
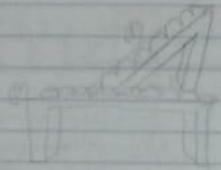
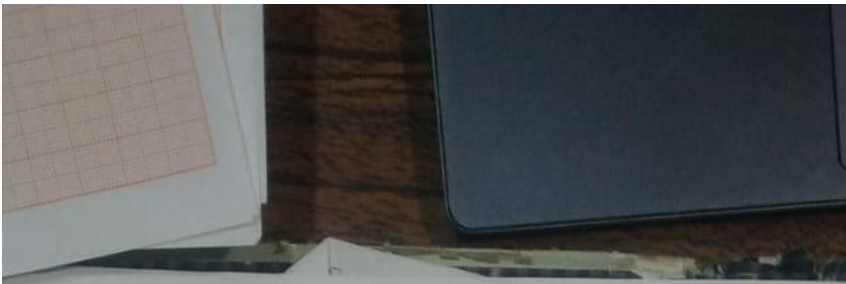
$$P = 2.10 \text{ t/m} \cdot 1.15 = 241.5$$

$$MA = - (1.207 + 0.383) - (1.05 \cdot 1.75) - (1.05 \cdot 2.75)$$

$$-0.462 - 1.837 - 2.887$$

$$MA = -5.186 \text{ t.m}$$



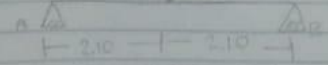
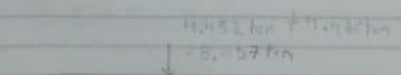


$$(-8.95 \times 2.025) + (1.07 \times 1.02) = -17.028 + 1.0914 = -15.9366 \text{ kNm}$$

$$R_A = 20.200 - 1.7897 = 18.4103 \text{ kN}$$

$$4.05$$

$$R_B = 8.95 + 1.07 = 10.02 \text{ kN}$$

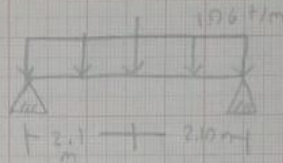
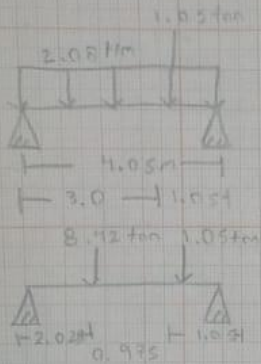
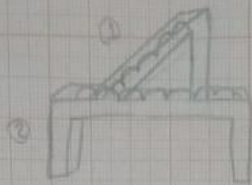


$$R_A = 18.4103 - 1.07 = 17.3403 \text{ kN}$$

$$17.3403 - 1.07 = 16.2703 \text{ kN}$$

$$16.2703 + 1.07 = 17.3403 \text{ kN}$$

$$R_B = 18.4103 + 1.07 = 19.4803 \text{ kN}$$



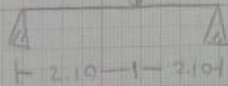
$$(-8.424 \text{ ton/m} \cdot 2.025) / -1.05 / \text{m} \cdot 3.0 \text{ m} / \text{RB} \cdot 4.05 / -17.058 \cdot 3.15 / \text{RD} \cdot 4.05$$

$$RB = \frac{20.208}{4.05} = 4.98977 \text{ ton}$$

$$RA = -8.424 - 1.05 + 4.989 = 4.985 \text{ ton}$$

$$4.982 \text{ t/m} \cdot 4.05 \text{ m} + 4.985 \text{ ton}$$

$$= 8.957 \text{ ton}$$



$$RA = 1.5 \cdot 7.39 \cdot 2.1 / (RB \cdot 4.2) = 18.7677$$

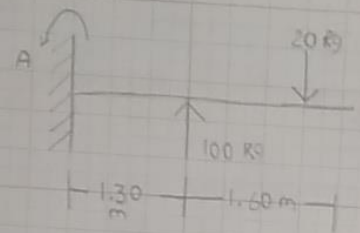
$$-18.7677 / 4.2$$

$$+ 4.985$$

$$RA = 18.7677 / 4.2 + 4.985 \text{ ton} = 7.4685 = 0$$

Rayter

①



$$1.30 \times 100 = 130$$

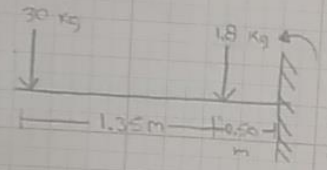
$$2.9 \times 20 = -58$$

$$130 \text{ kg} \cdot \text{m} - 58 \text{ kg} \cdot \text{m} = 0$$

$$M_A = 72 \text{ kg} \cdot \text{m}$$

$$R_A = 72 \text{ kg} \cdot \text{m}$$

②

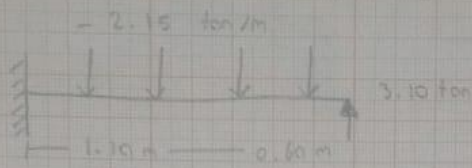


$$M_A = (-1.8 \text{ kg} \cdot 0.50 \text{ m}) + (30 \text{ kg} \cdot 1.85 \text{ m})$$

$$M_A = (-0.9 \text{ kg} \cdot \text{m}) + (55.5 \text{ kg} \cdot \text{m})$$

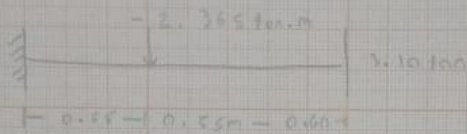
$$M_A = 54.6 \text{ kg} \cdot \text{m} \approx 55 \text{ kg} \cdot \text{m}$$

$$R_A = 64.5 \text{ kg} \cdot \text{m} \approx 65 \text{ kg} \cdot \text{m}$$



$$P = w \cdot L \rightarrow 2.15 \text{ ton} \cdot 1.10 \text{ m} = 2.365 \text{ ton} \cdot \text{m}$$

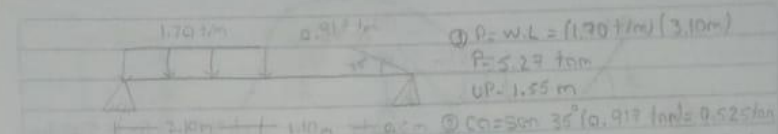
$$L_p = L/2 = 1.10 \text{ m} / 2 = 0.55$$



$$\sum M = 0$$

$$R_A = (-2.365 \text{ ton} \cdot \text{m} \cdot 0.55 \text{ m}) + (3.10 - 1.20 \text{ ton}) = 0$$

$$R_A = 3.969 \text{ t.m}$$



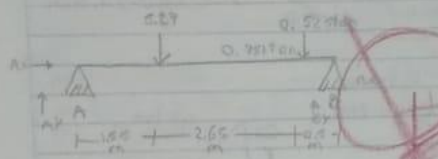
$$\textcircled{1} P = w \cdot L = (1.70 \text{ t/m})(3.10 \text{ m})$$

$$P = 5.27 \text{ ton}$$

$$UP = 1.55 \text{ m}$$

$$\textcircled{2} C = \sin 30^\circ (0.917 \text{ tons}) = 0.4585 \text{ tons}$$

$$CA = \cos 30^\circ (0.917 \text{ tons}) = 0.79 \text{ tons}$$



$$\sum F_x = 0$$

$$0.751 \text{ ton} - B_x = 0$$

$$B_x = 0.751 \text{ ton}$$

$$\sum F_y = 0$$

$$A_y - 5.27 \text{ ton} - 0.663 \text{ ton} + B_y = 0$$

$$A_y + B_y = 5.93 \text{ ton}$$

$$B_x = 0.751 \text{ ton}$$

$$A_y = 3.587 \text{ ton}$$

$$B_y = 2.208 \text{ ton}$$

$$\sum M_B = 0$$

$$-0.525 \text{ ton}(0.5 \text{ m}) - 5.27 \text{ ton}(3.15 \text{ m}) + A_y(4.7 \text{ m}) = 0$$

$$-0.2625 - 16.6005 + A_y \cdot 4.7 \text{ m} = 0$$

$$-16.863 \text{ ton} + A_y \cdot 4.7 \text{ m} = 0$$

$$A_y = 16.863 \text{ ton} / 4.7 \text{ m}$$

$$A_y = 3.587 \text{ ton}$$

$$B_y = 5.93 \text{ ton} - A_y$$

$$B_y = 5.93 \text{ ton} - 3.587 \text{ ton}$$

$$B_y = 2.208 \text{ ton}$$