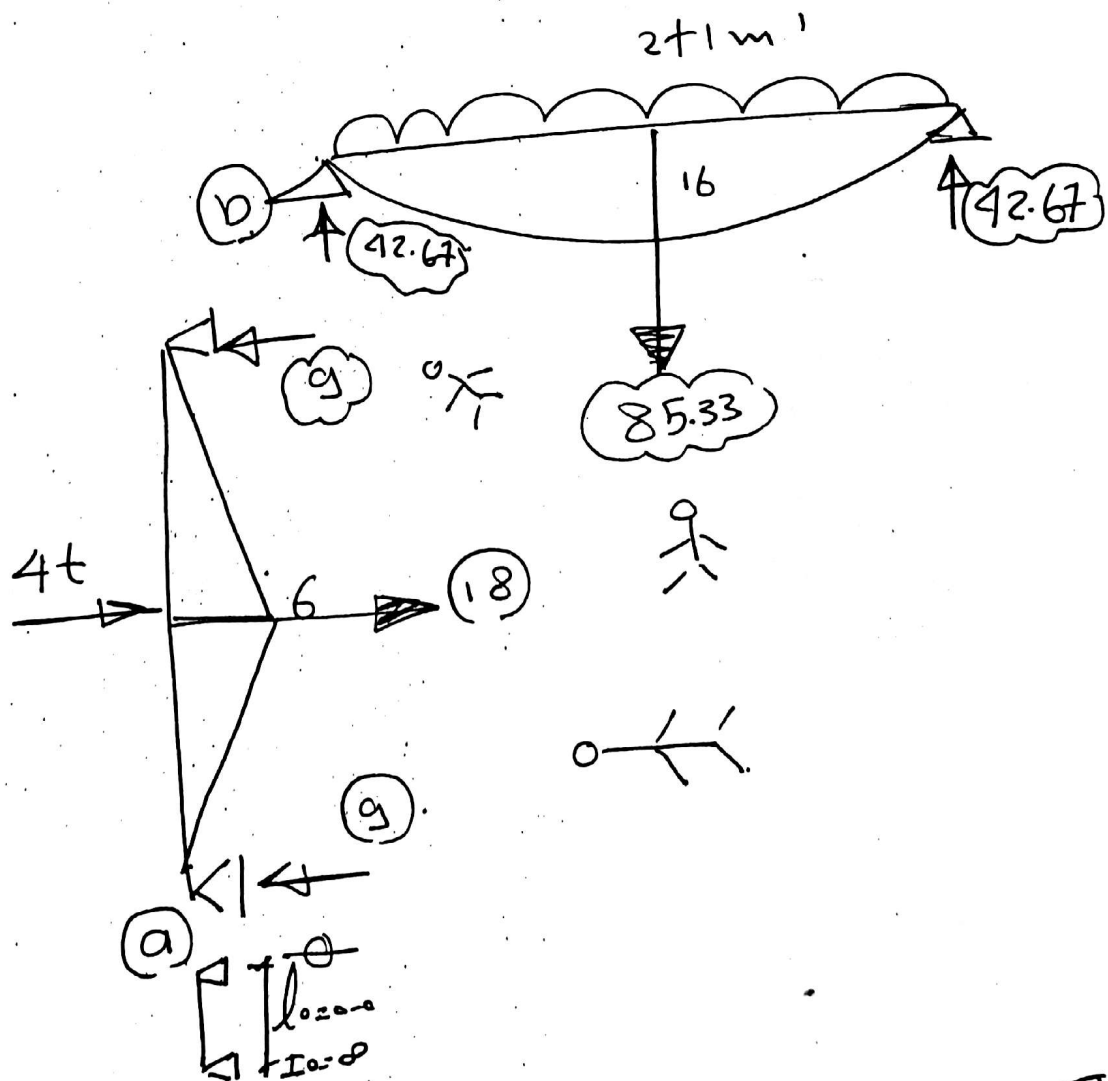
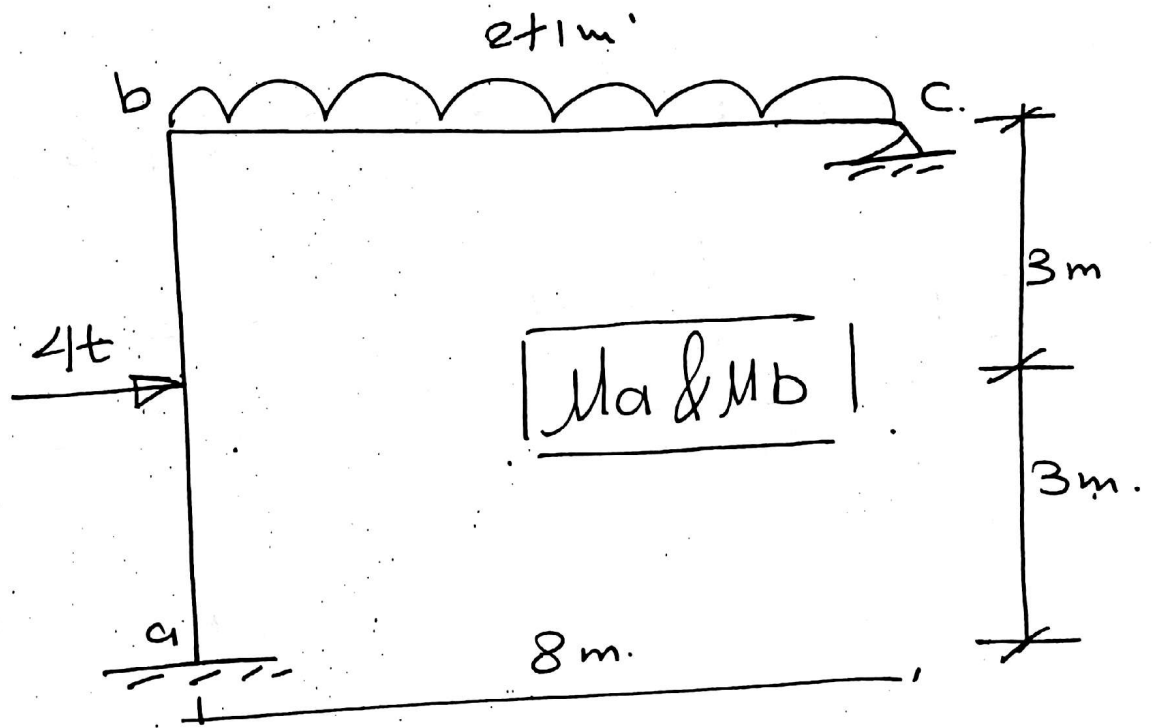


EX:1



1

3. Mequata:

$$0.0 + 2\mu_a(0 + 6) + \mu_b(6)$$


$$= -6 [0 + 9]$$


 $\mu_a \& \mu_b.$

3. Mequata b:

$$\mu_a(6) + 2\mu_b(6 + 8) + 0.0$$

$$= -6 [9 + 42.67]$$

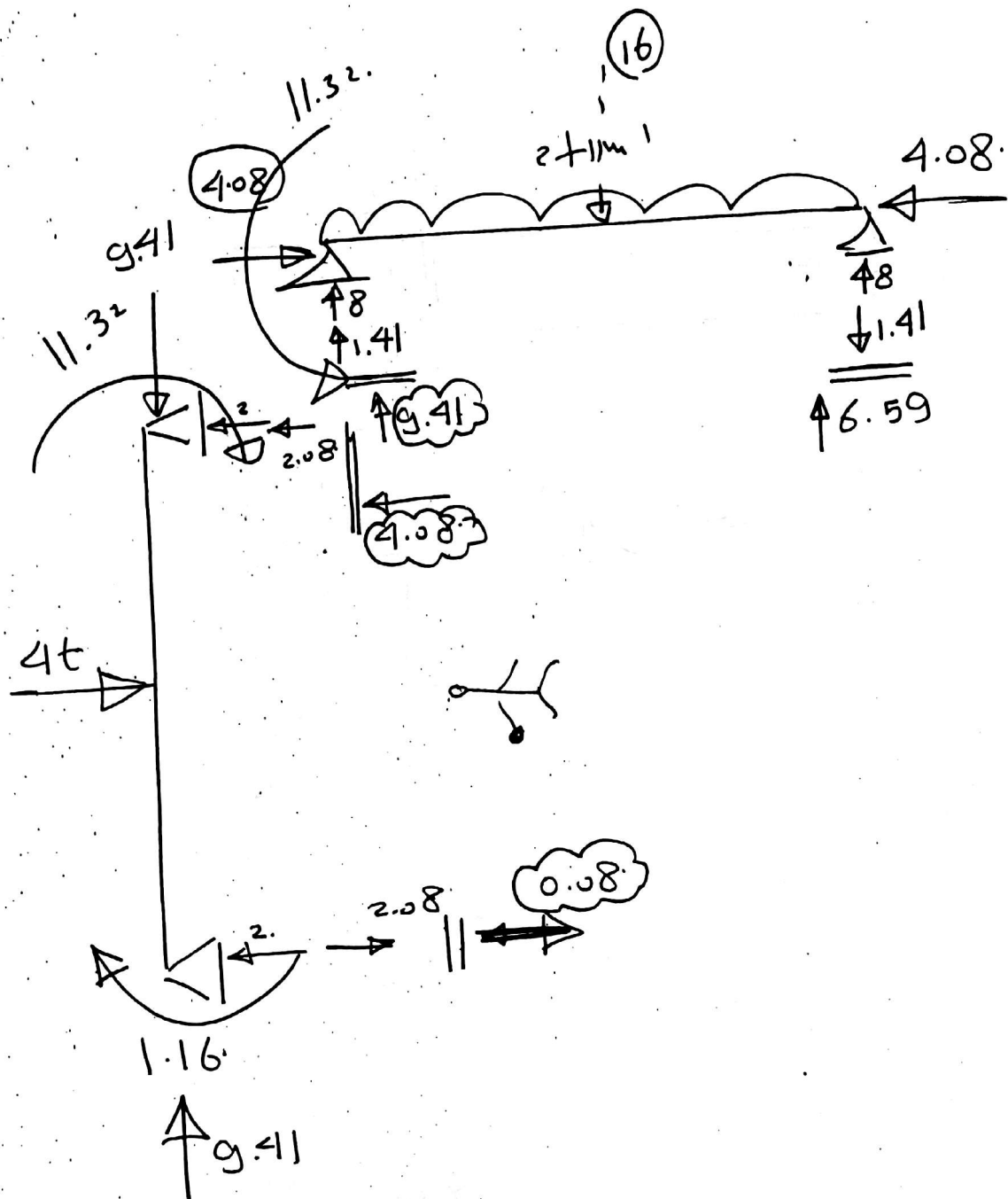

 $\mu_a \& \mu_b.$

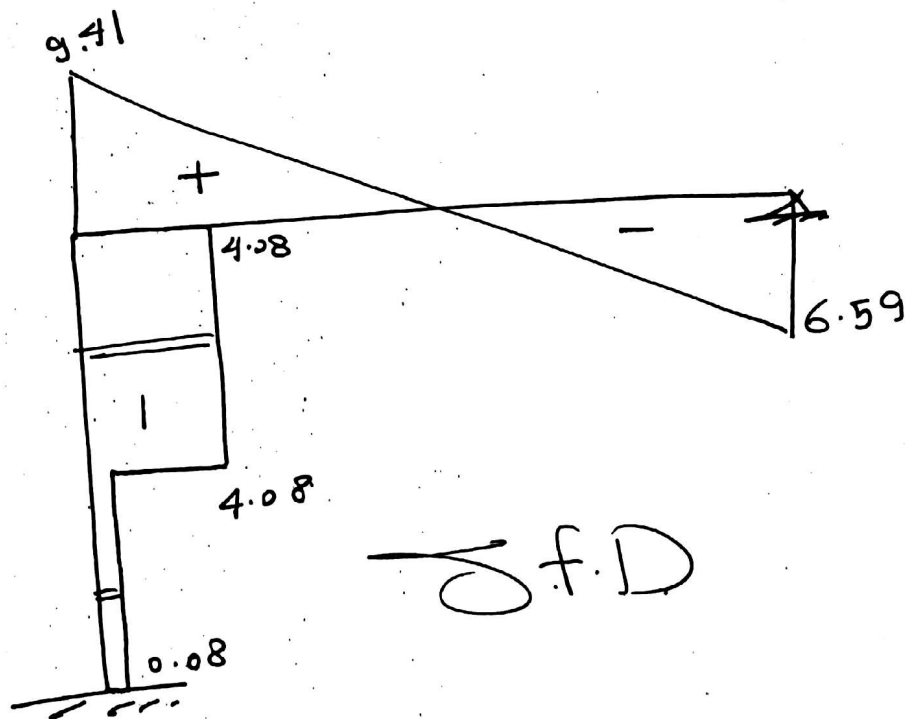
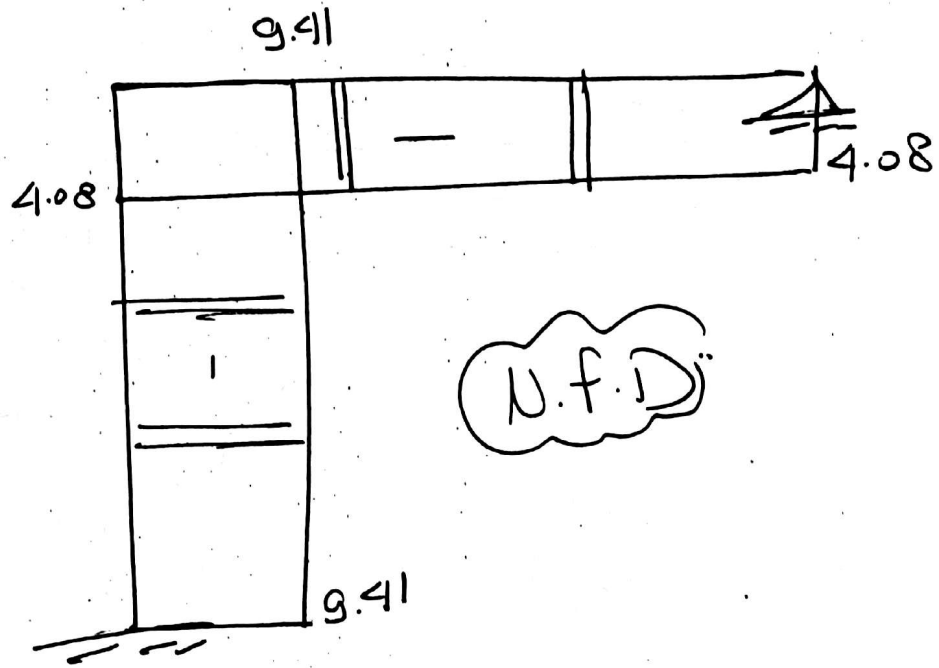
by solving ① & ② get

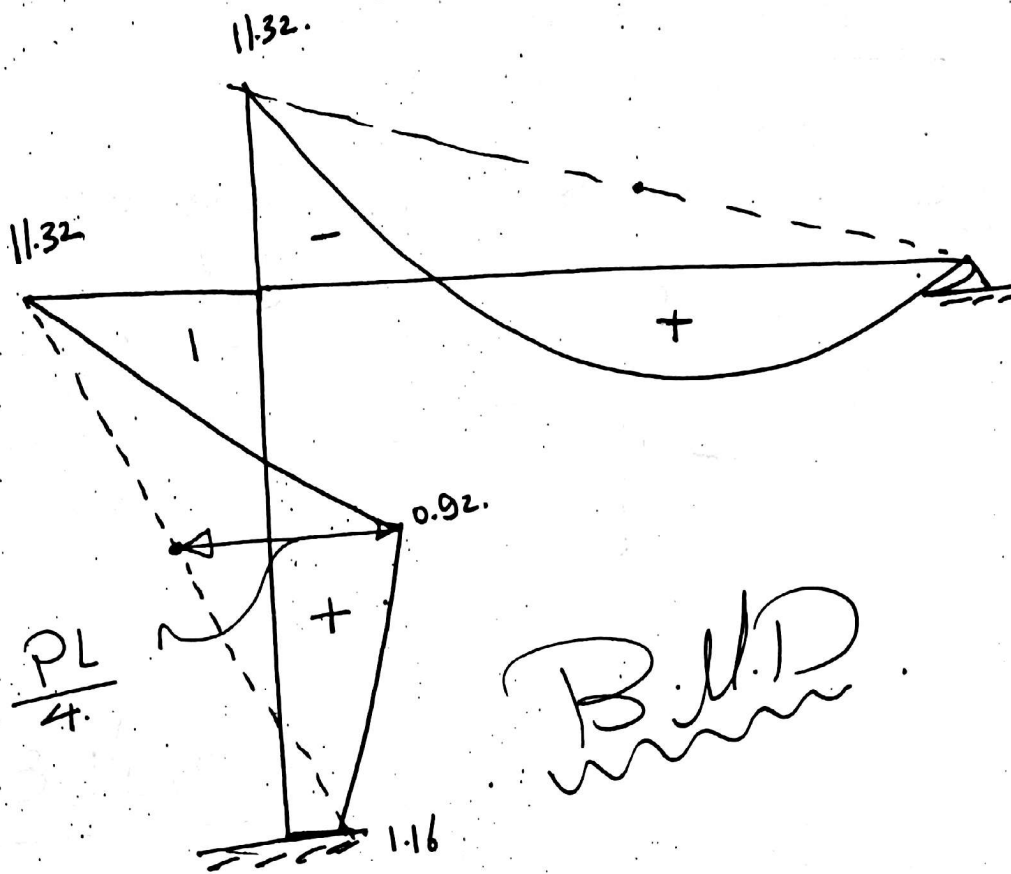
$$\mu_a = +1.16$$

$$\mu_b = -11.32.$$

2



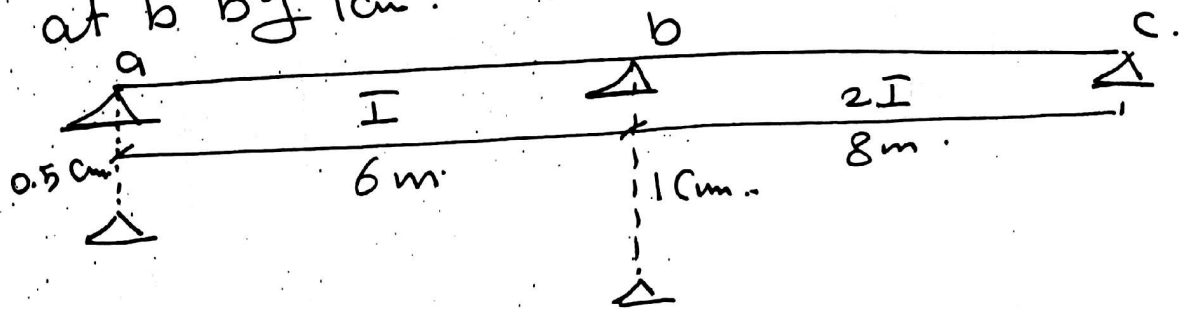




5

* Settlement of supports *

Draw B.M.D due to settlement at a by 0.5 cm & at b by 1 cm.



3. M eqn at b:

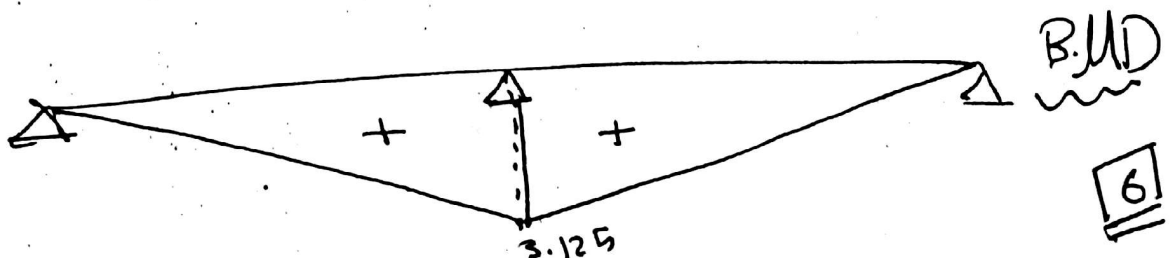
$$0.0 + 2M_b \left(\frac{6}{I} + \frac{8}{2I} \right) + 0.0$$

$$= -6E \left[\frac{\text{Left end settlement} - \text{Right end settlement}}{\text{Length of left span}} + \frac{\text{Right end settlement} - \text{Left end settlement}}{\text{Length of right span}} \right]$$

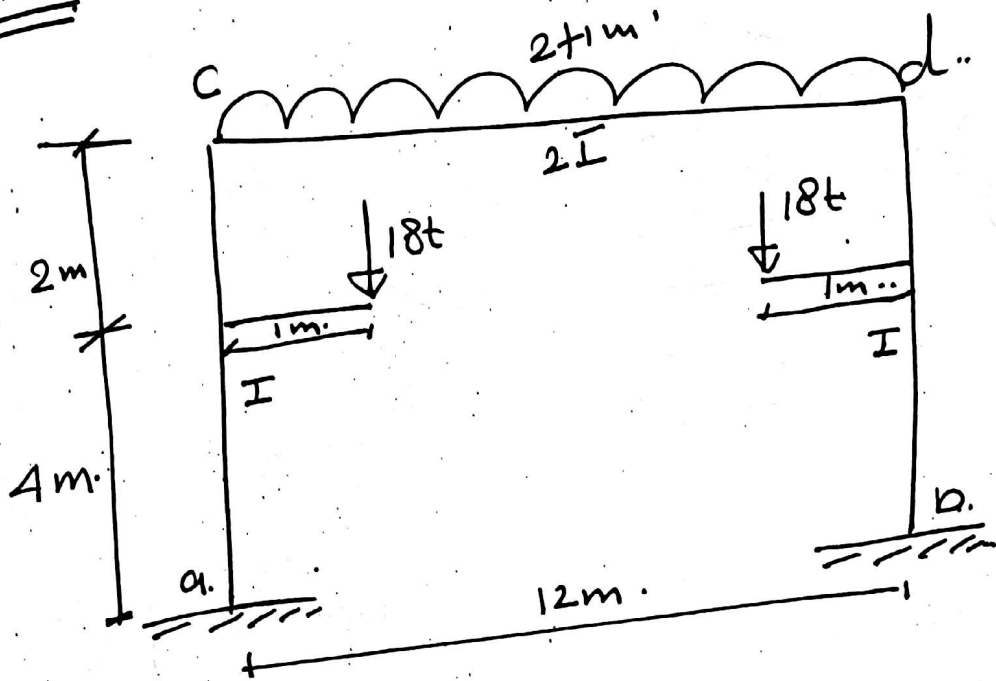
$$= -6(EI) \left[\frac{0.5 - 1}{600} + \frac{0 - 1}{800} \right]$$

Given
5000

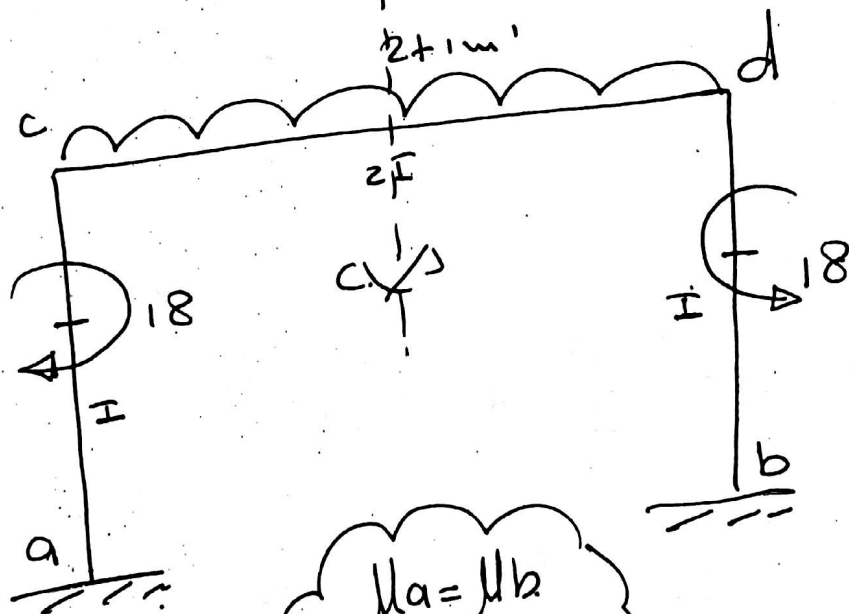
Get $M_b = +3.125$



EX:1



1. الخلع من الواسط



$$\mu_a = \mu_b$$

$$\mu_c = \mu_d$$

7

3. Method:

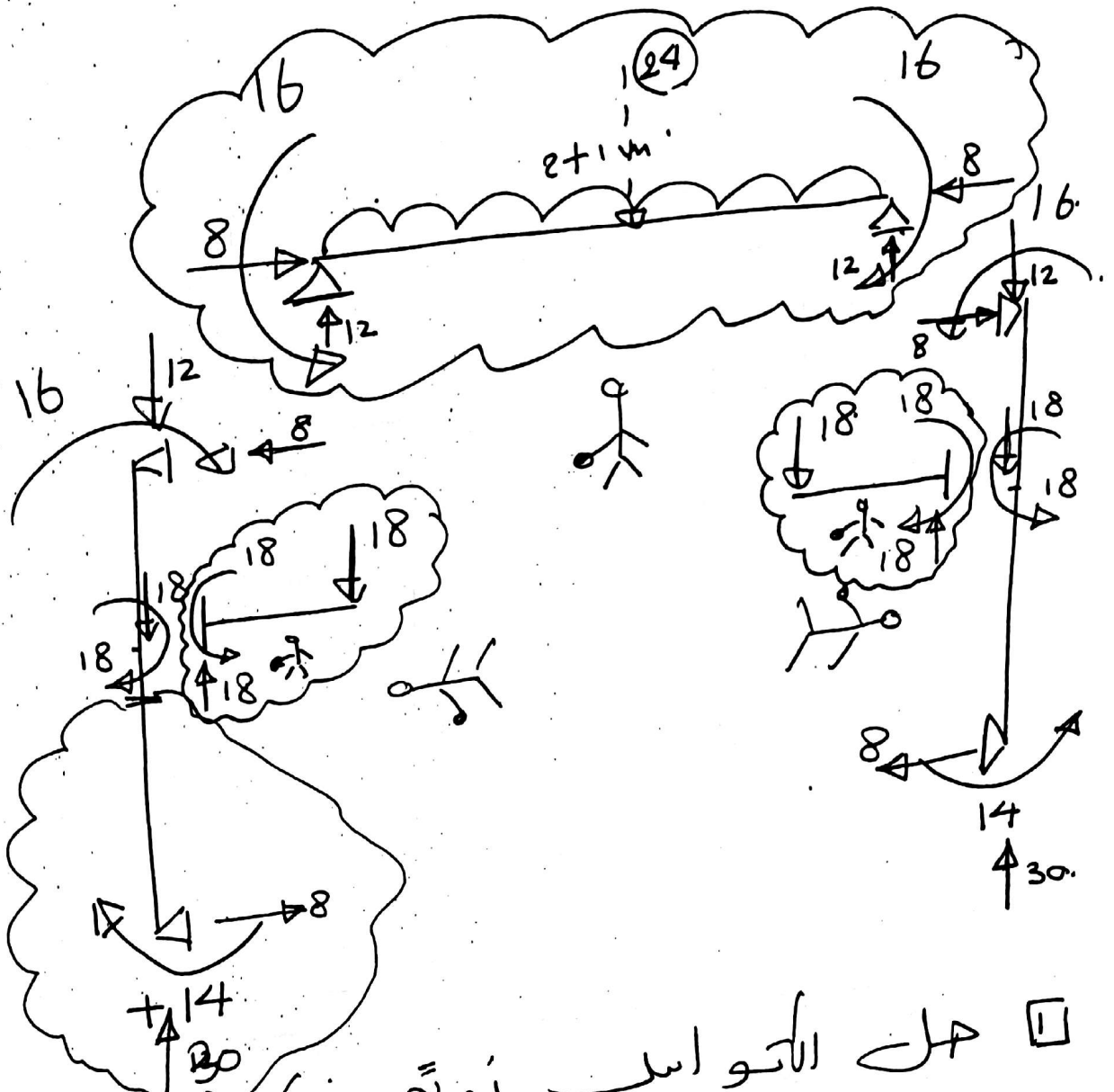
$$M_a \left(\frac{6}{\cancel{F}} \right) + 2M_c \left(\frac{6}{\cancel{F}} + \frac{12}{2\cancel{F}} \right) + M_c \left(\frac{12}{2\cancel{F}} \right) = -6 \left[\frac{-6}{\cancel{F}} + \frac{144}{2\cancel{F}} \right]$$

————— \Rightarrow (2)

M_a & M_c .

by solving (1) & (2) get

$$\begin{aligned} M_a &= +14 + m \dots \\ M_c &= -16 + m \dots \end{aligned}$$



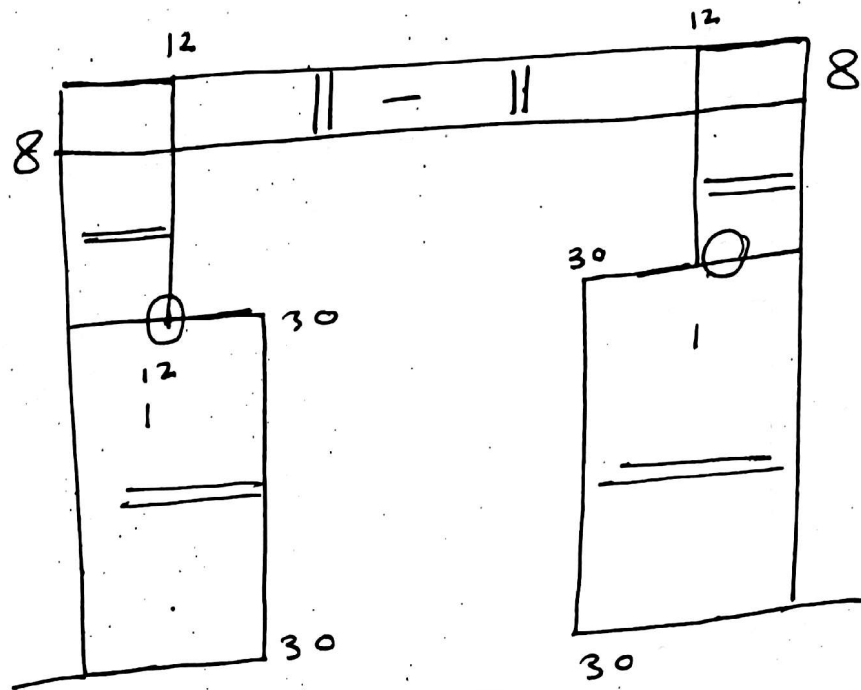
حل التوابيع أدلة و على Simple.

٢. إيجاد رد reactions لكل كمره على

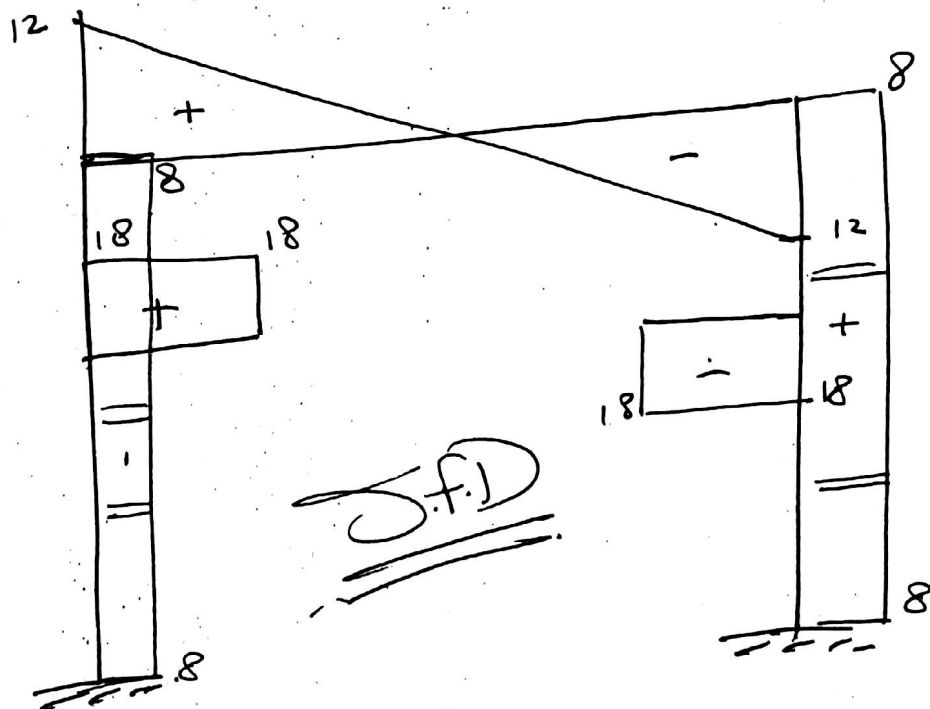
٣. عمل إشارات للقوى عند كل Joint

٤. عمل إشارات لكل مفاصل



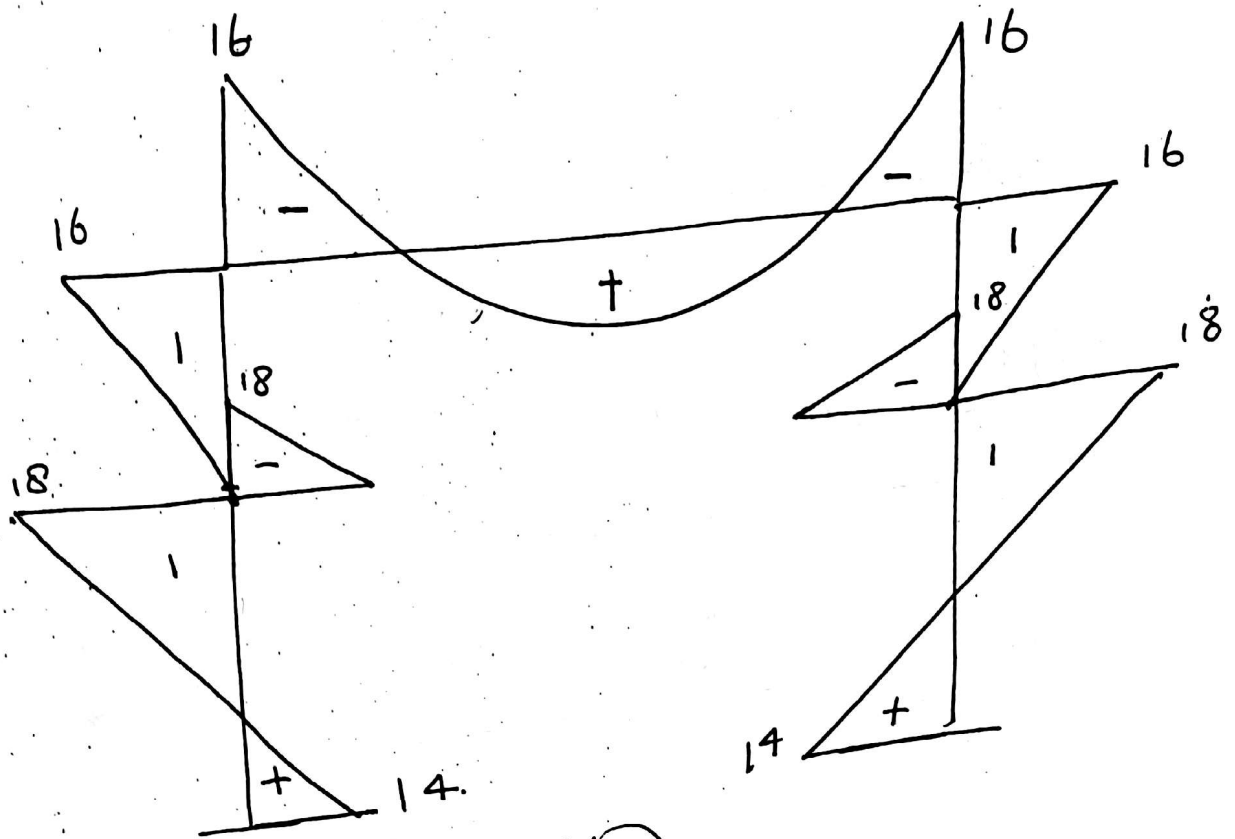


W.F.D

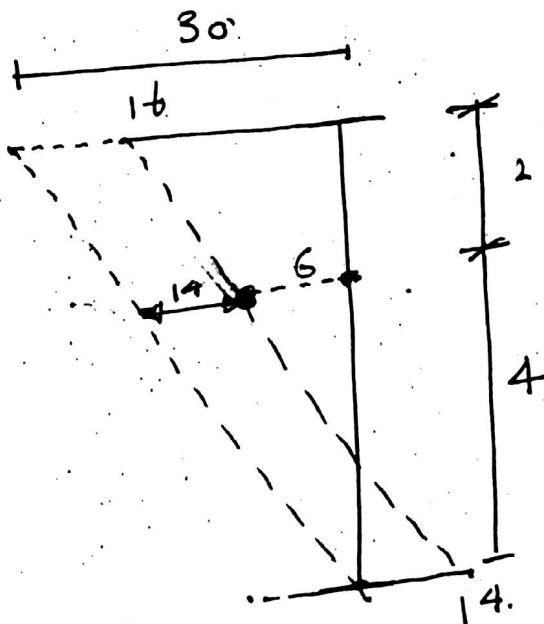


S.F.D

||

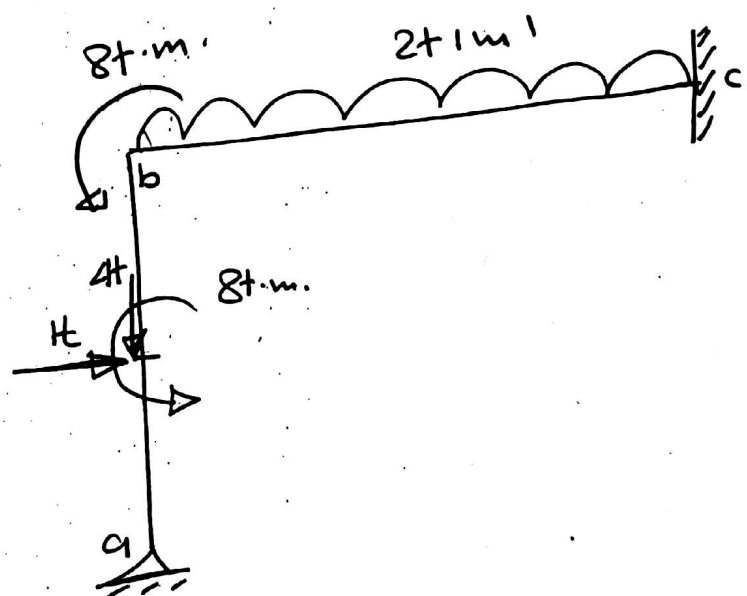
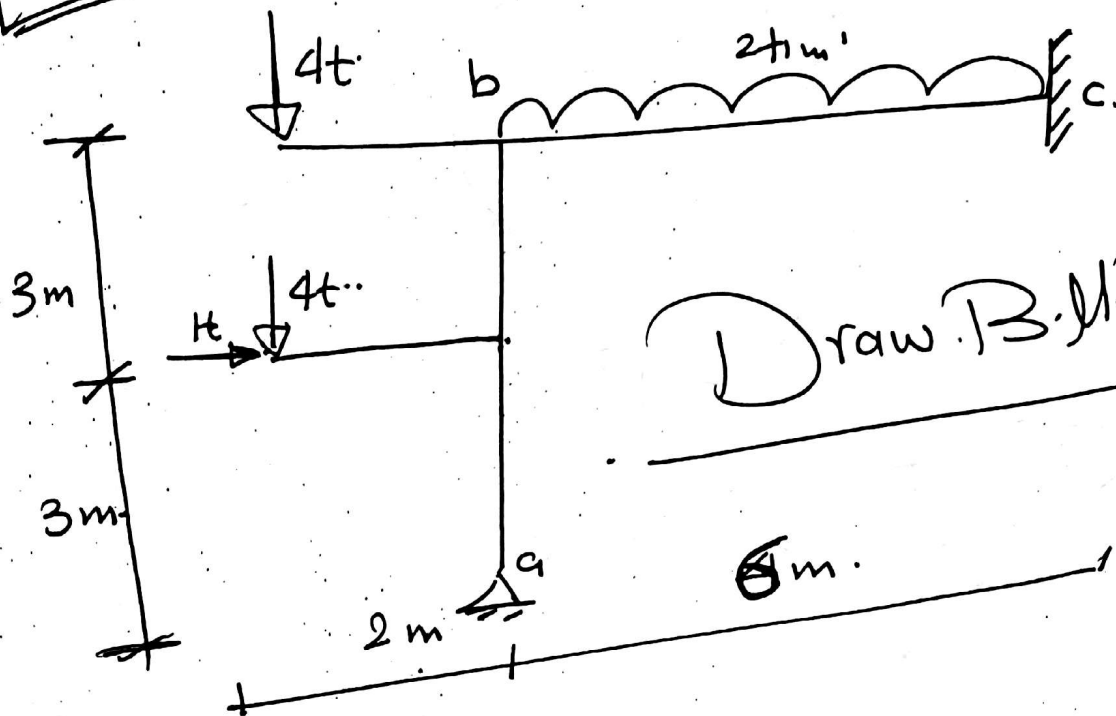


B.M.D



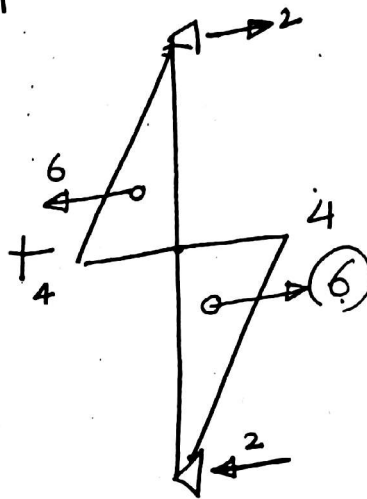
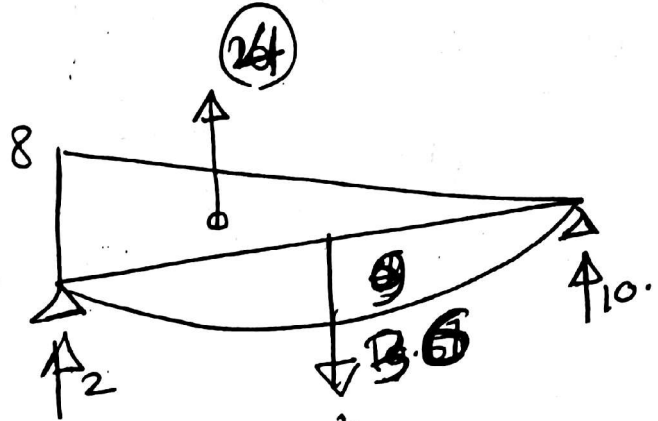
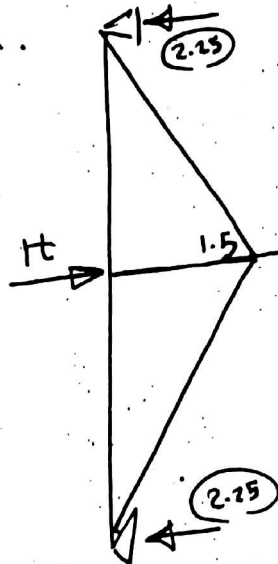
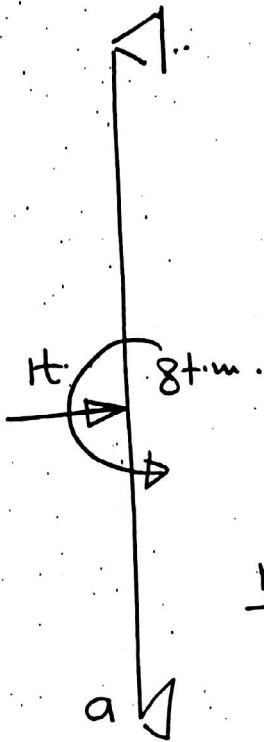
12

EX: 2

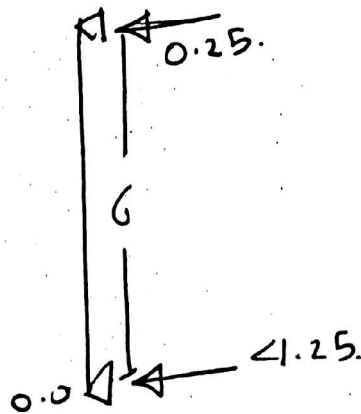
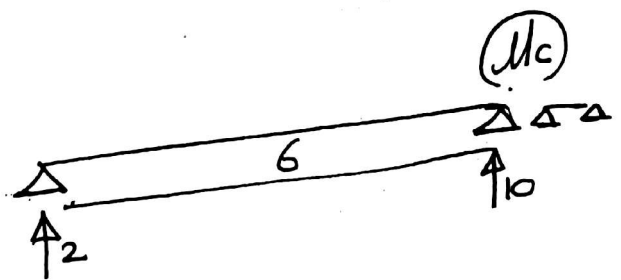


13

(b)



(b)



14

3. Mat (b):

$$\begin{aligned} 0.0 + 2M_b(6+6) + M_c(6) \\ = -6[0.25 + 2] \end{aligned} \quad \text{①}$$

$M_b \& M_c.$

3. Mat c:

$$\begin{aligned} M_b(6) + 2M_c(6+0) + 0.0 \\ = -6[10 + 0] \end{aligned} \quad \text{②}$$

$M_b \& M_c.$

by solving ① & ② get

$$\begin{aligned} M_b &= 0.785 \\ M_c &= -5.39 \end{aligned}$$

