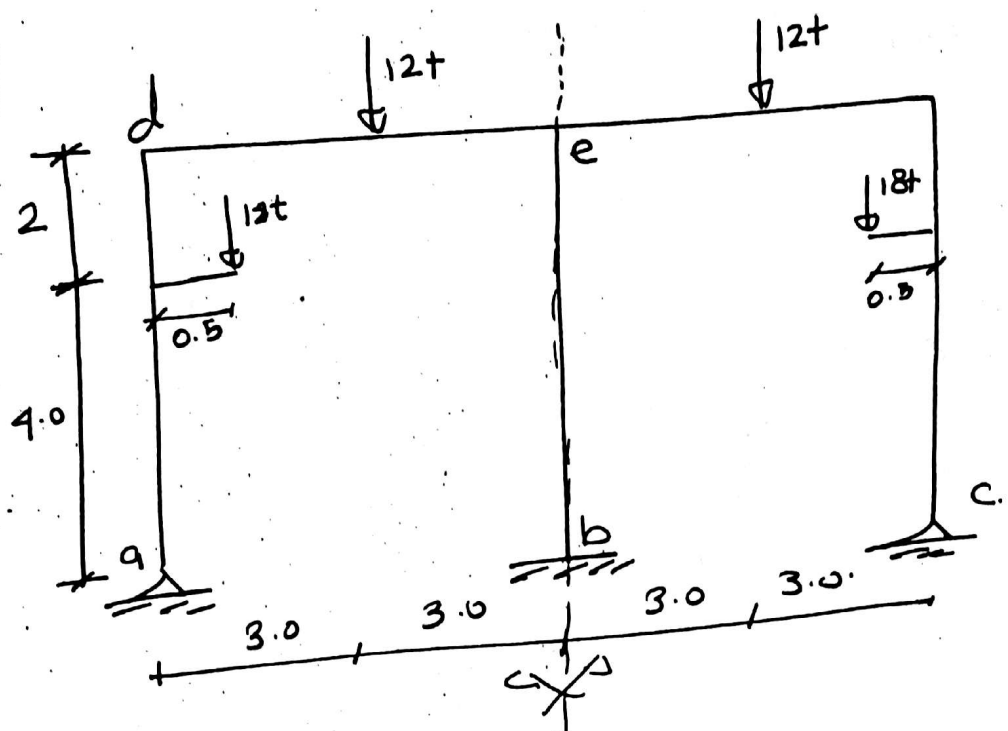
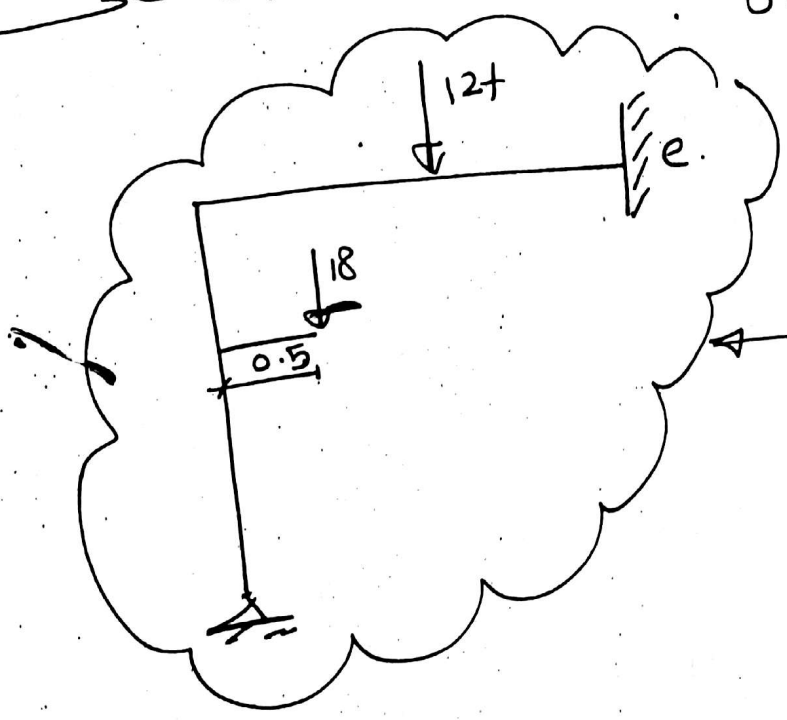


* Revision (frame) *

EX:1

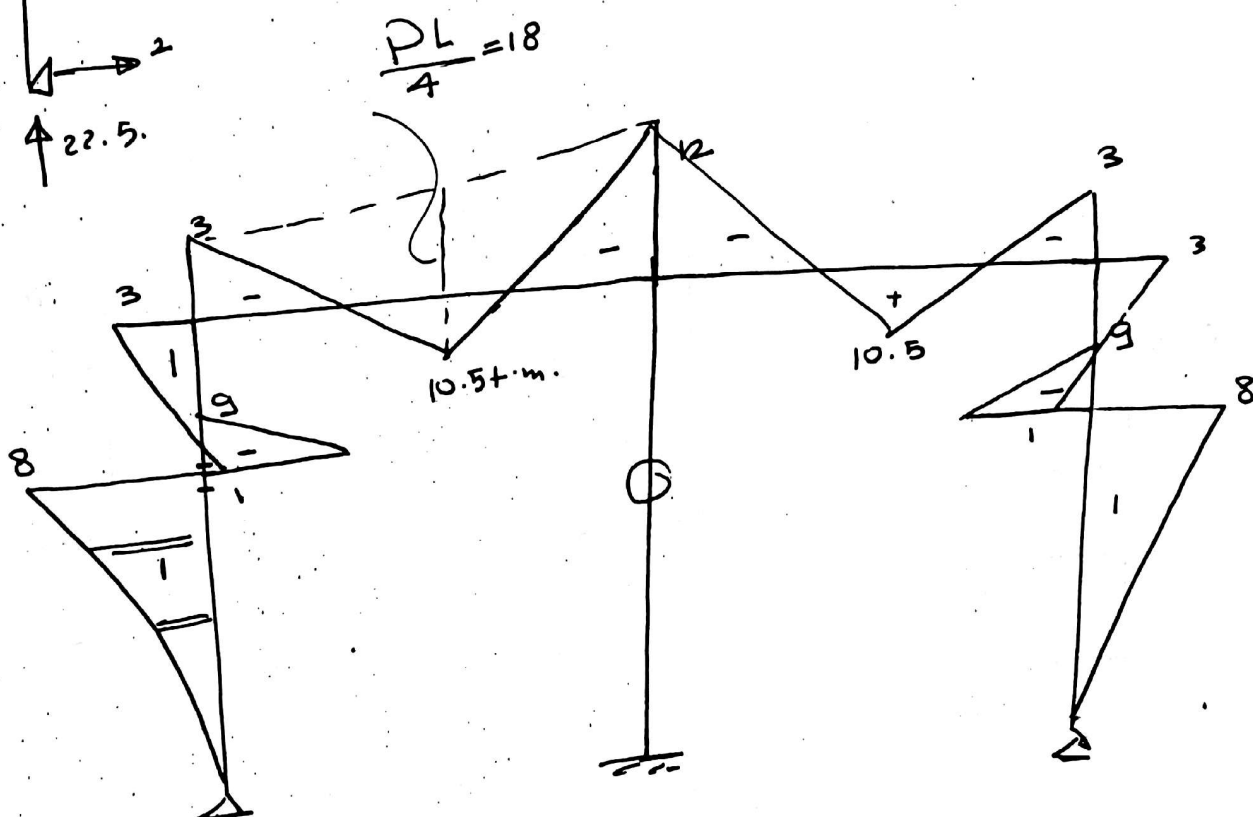
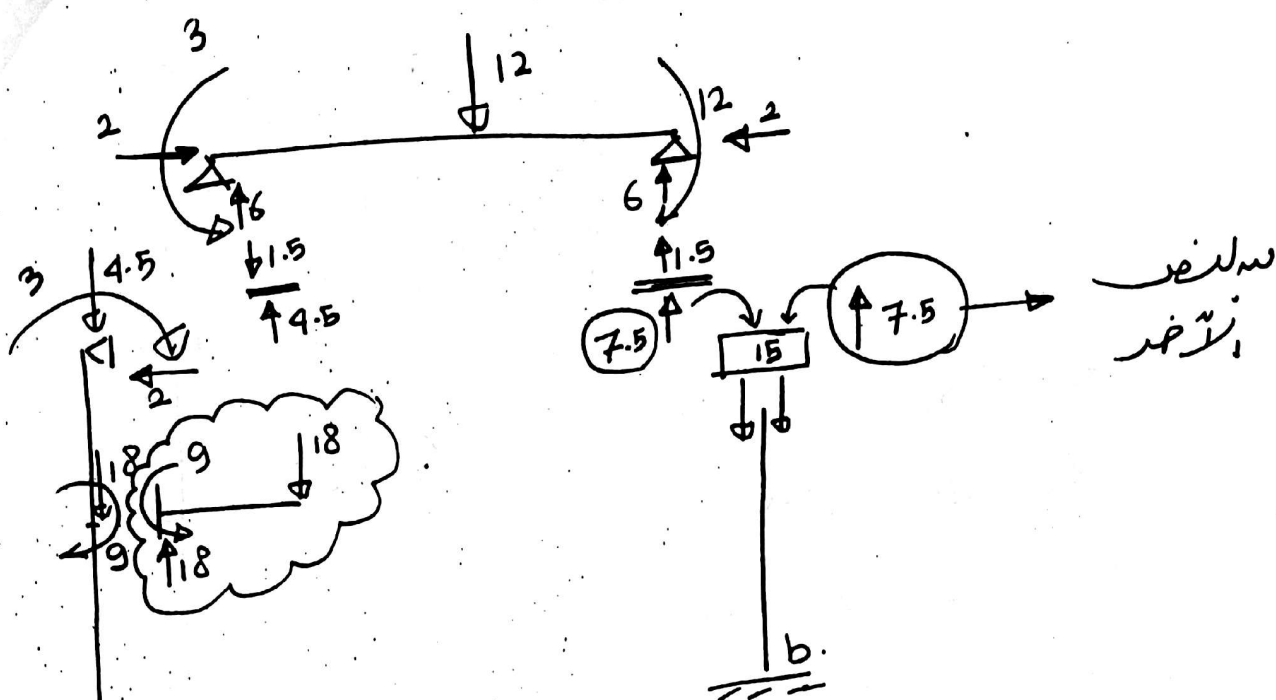


* در این فریم و محورها نشان داده شده
 در فریم از جهت Fixed و محل
 اینها را در B.D & F.D = 0.0

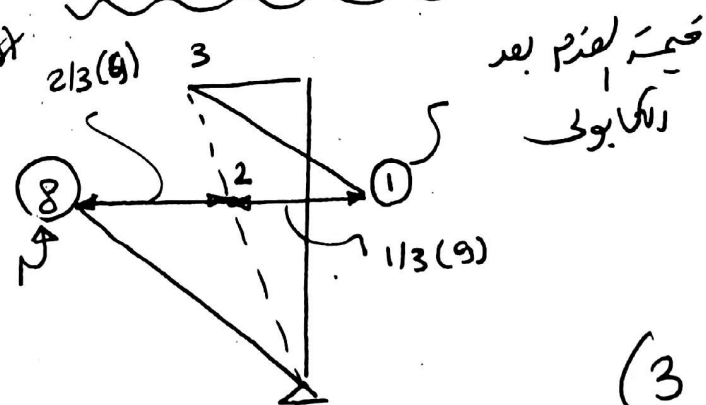
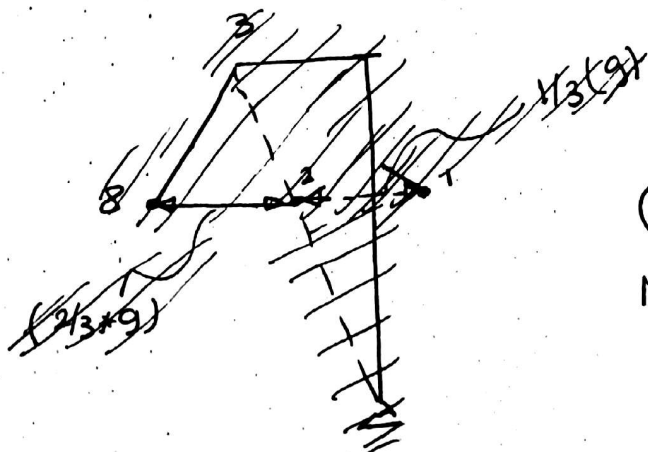


در فریم به
 نشان داده شده





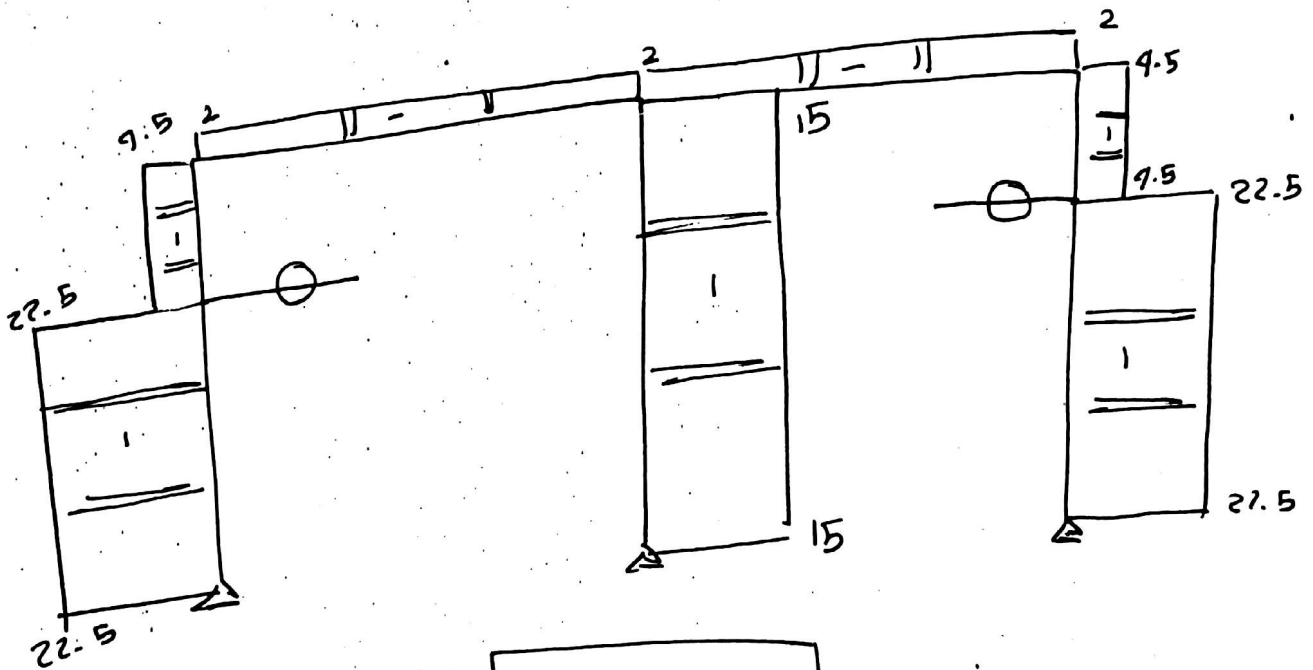
* یجاد العزم قبل وبعد الكابوك





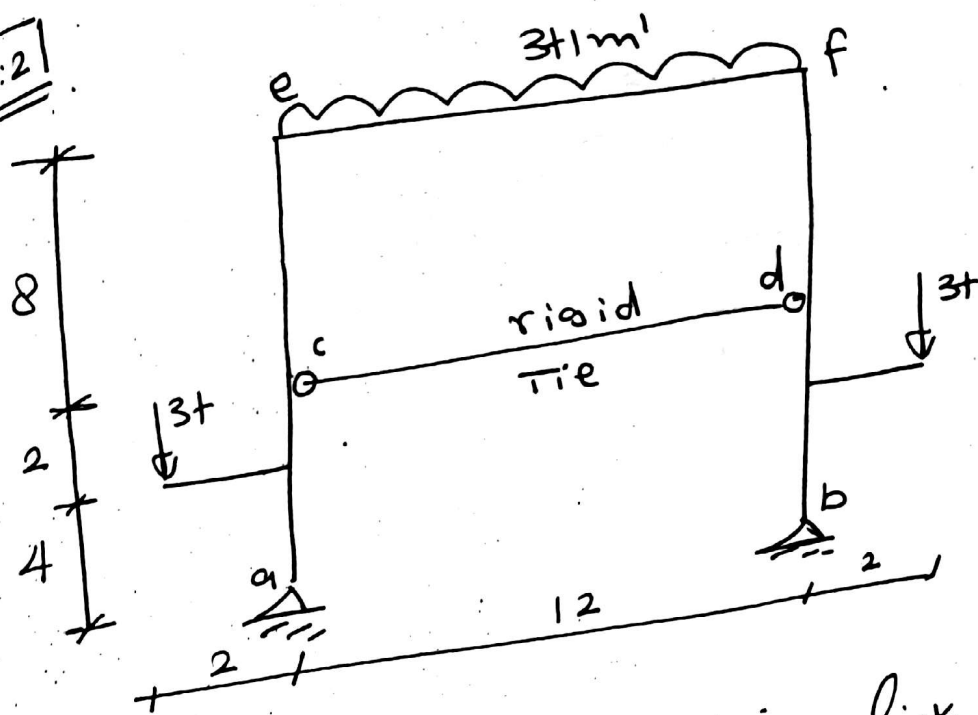
S.F.D

Shear Force Diagram
 على كل نصف، رقم
 والعدد الذي
 النصف
 (Zero shear)

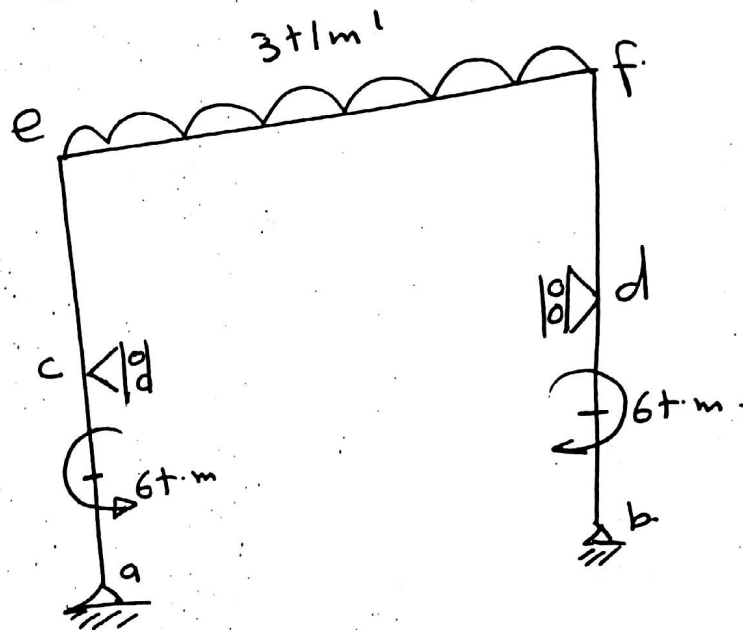


B.M.D

EX:2



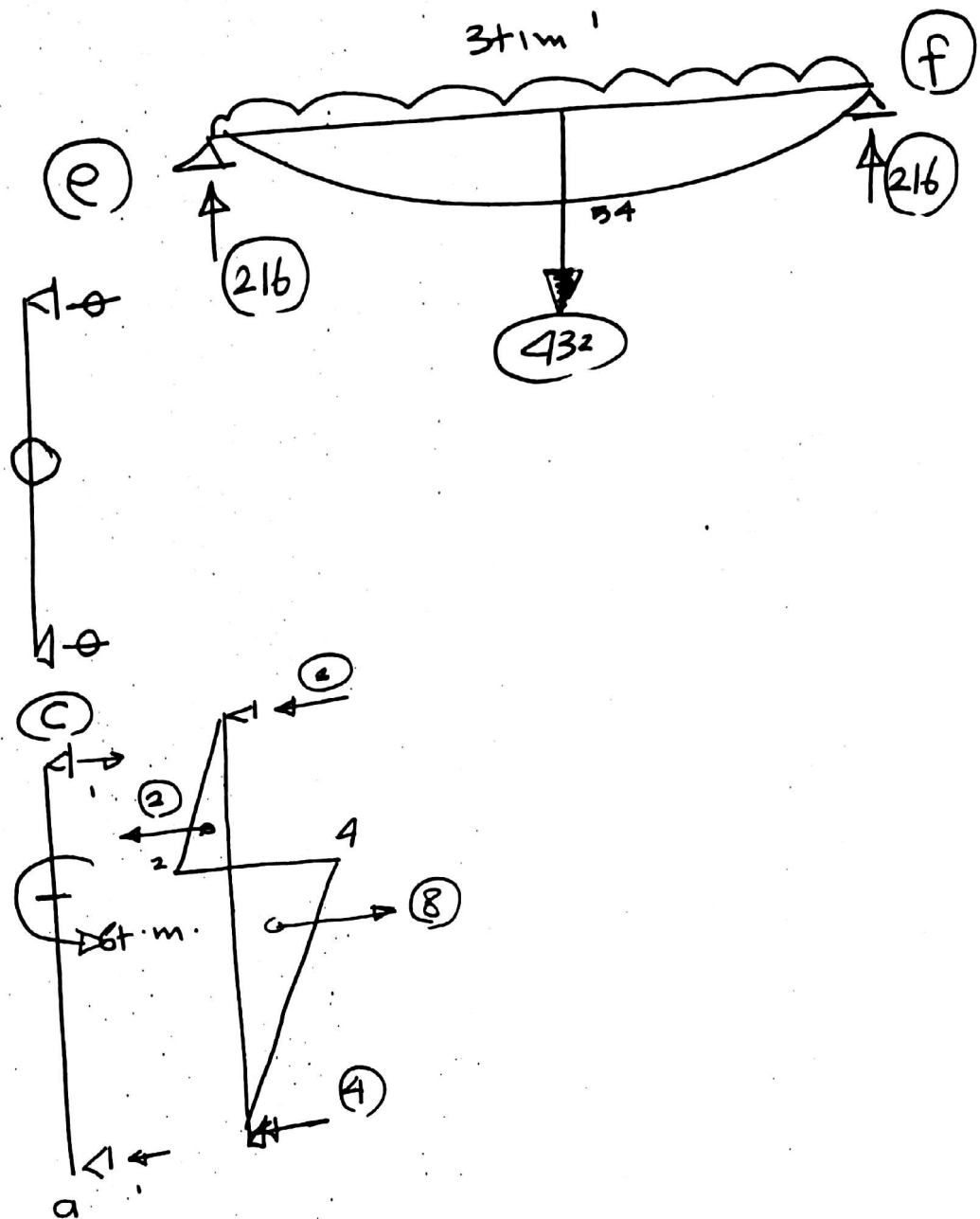
عنصر به کینز link
در frame
3. Member در
عنصر به کینز
در frame



$$\begin{aligned} M_c &= M_d \\ M_e &= M_f \end{aligned}$$

به لحاظ ...

$$M = M_e$$



3. Mequ at c:

$$0.0 + 2M_c(6+8) + M_e(8) = -6[2+0]$$

$$28M_c + 8M_e = -12 \rightarrow (1)$$

3. Mequ at e:

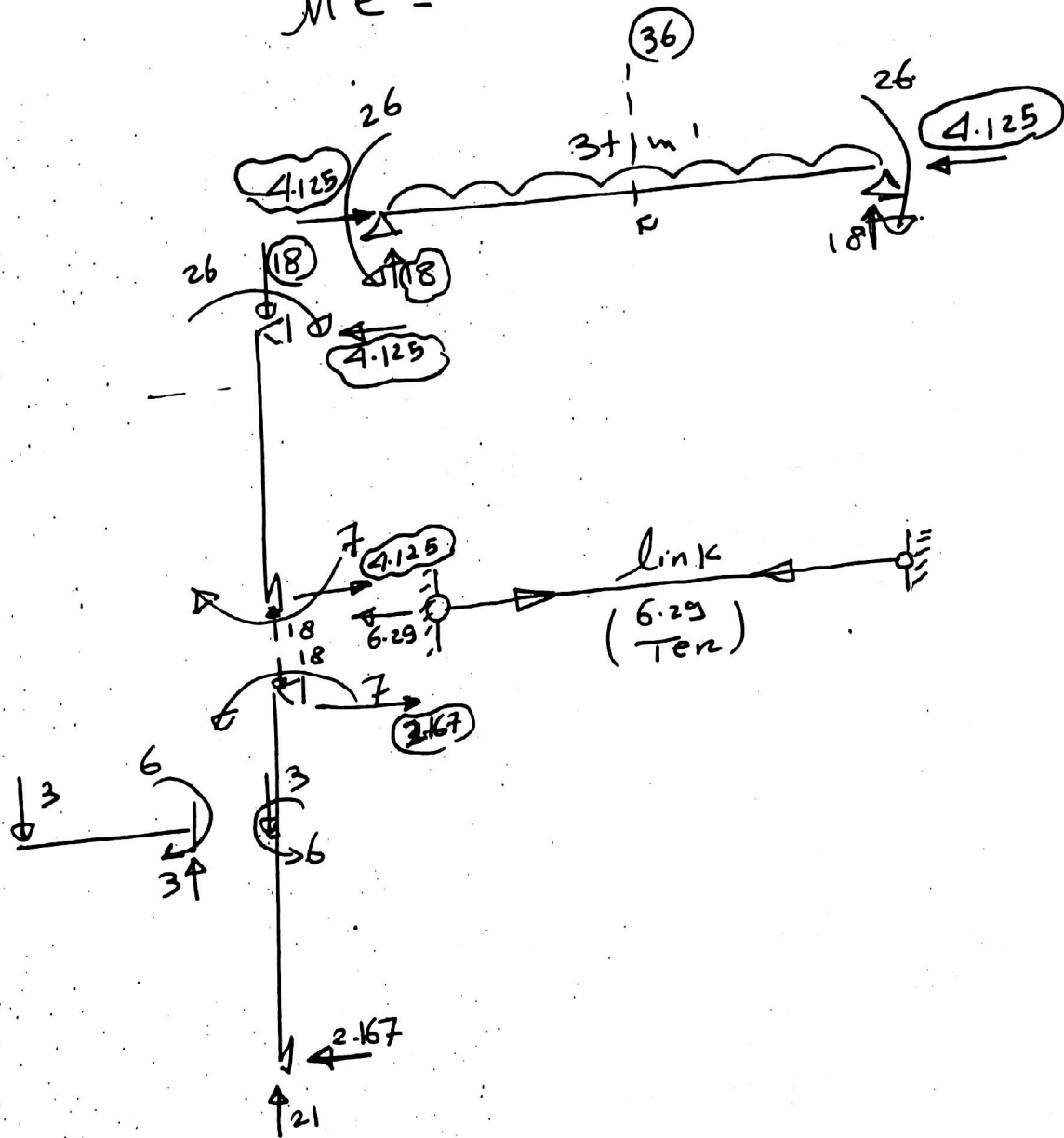
$$M_c(8) + 2M_e(8+12) + M_e(12) = -6(0+216)$$

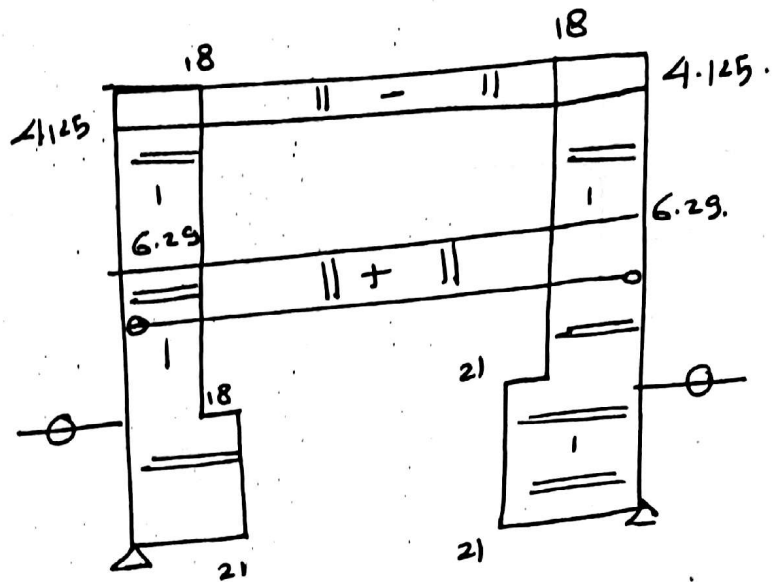
$$8M_c + 40M_e + 12M_e = -1296 \rightarrow (2)$$

by solving ① & ② get

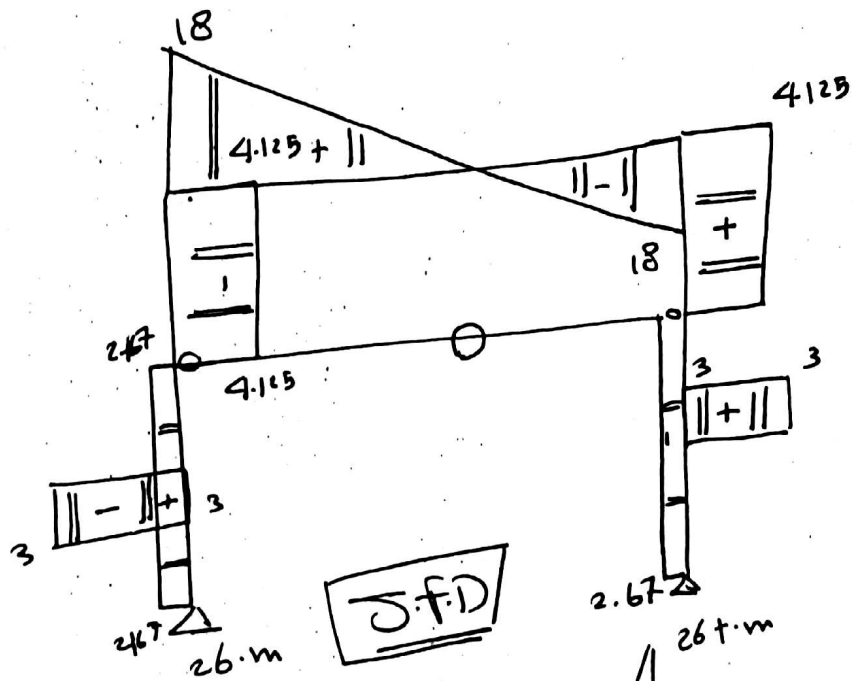
$$M_c = +7t \cdot m$$

$$M_e = -26t \cdot m$$

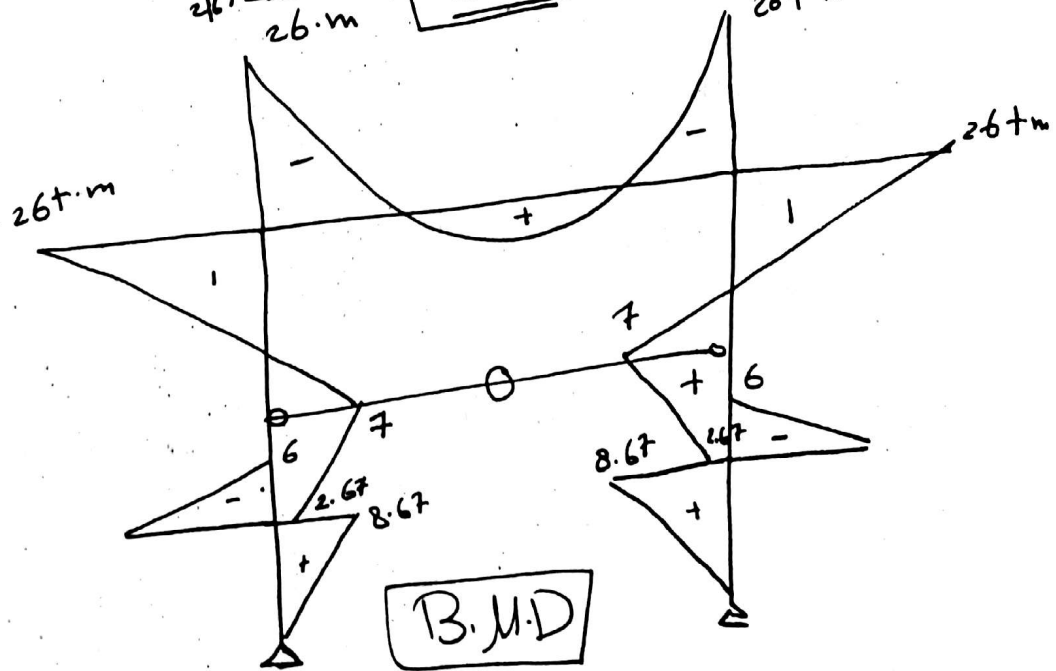




N.F.D

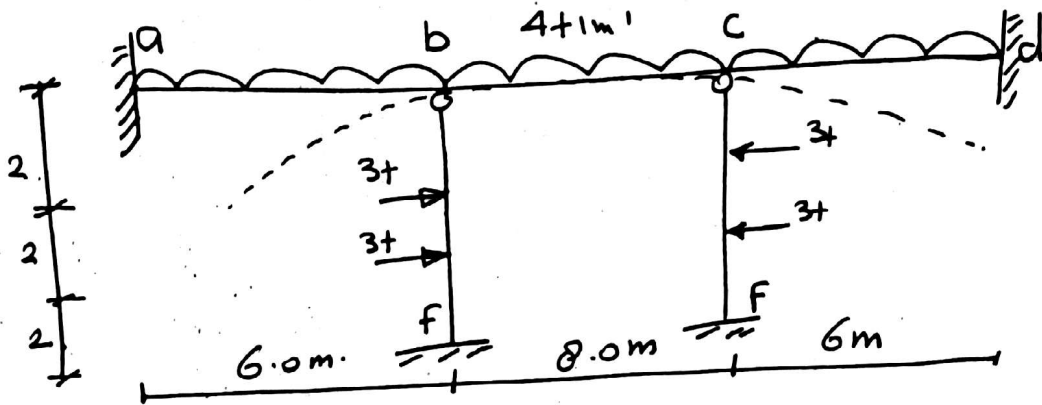


S.F.D



B.M.D

3] Draw B.M.D.:



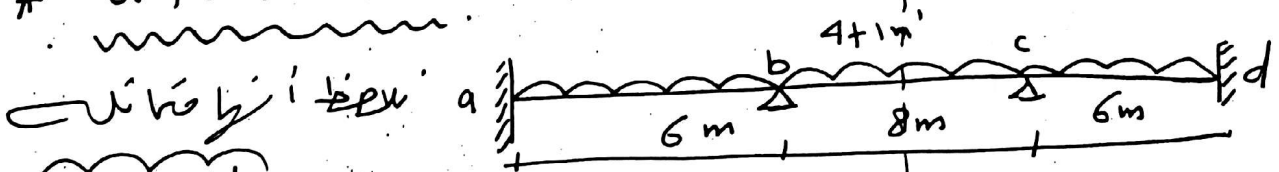
* در حالت دوم ۳ مقطع مستطین در نقاط

لاستیک حل در frame بار

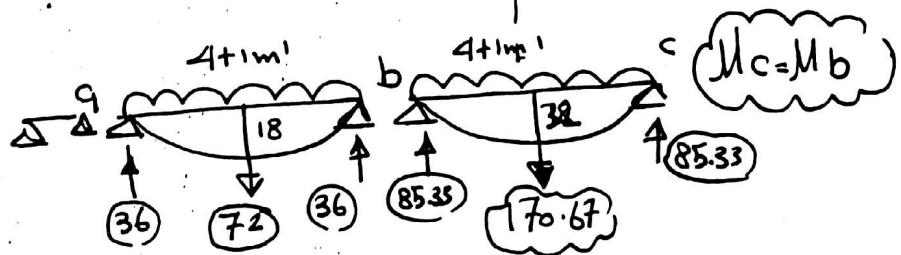
3.M.Equ

لذا جان فکری که در فرض در frame عندا ب و c و تحویل ای ۳ کتبات غیر خیره یق حل کل کتبه بار 3.M.Equ لوحها

* For Part abcd:



$$\therefore M_a = M_d \\ M_b = M_c$$



3.M.Equ at a:

$$0.0 + 2M_a(0+6) + M_b(6) = -6[0+36]$$

$$2M_a + M_b = -36 \rightarrow 1$$

3. Moment at b:

$$M_a(6) + 2M_b(6+8) + M_b(8) = -6[36 + 85.33]$$

$$6M_a + 36M_b - 728$$

$$3M_a + 18M_b = -364 \rightarrow (2)$$

by solving (1) & (2) get.

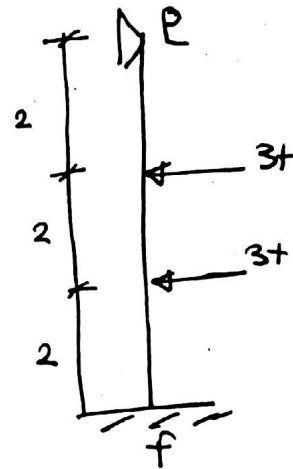
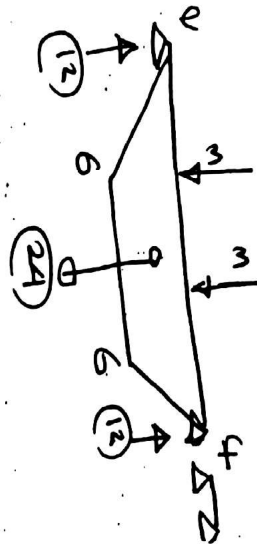
$$M_a = -8.61 + m$$

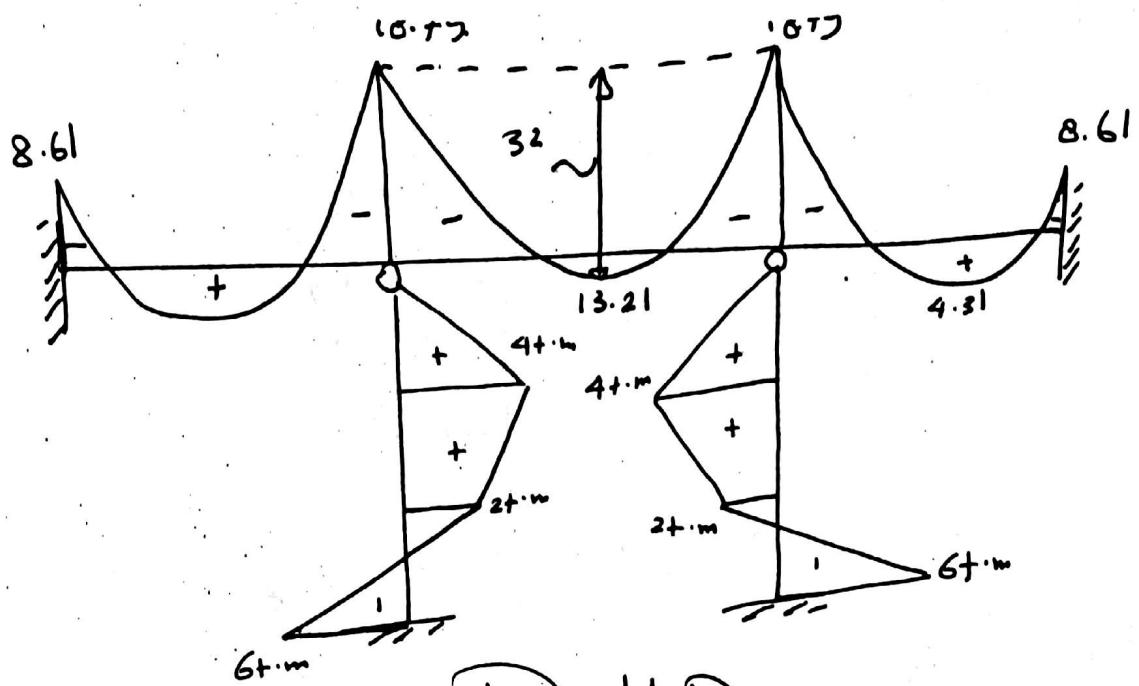
$$M_b = -18.79 + m$$

3. Moment at f:

$$0.0 + 2M_f(0+6) + 0.0 = -6(0.0 + 12)$$

$$\therefore M_f = -6 + m$$

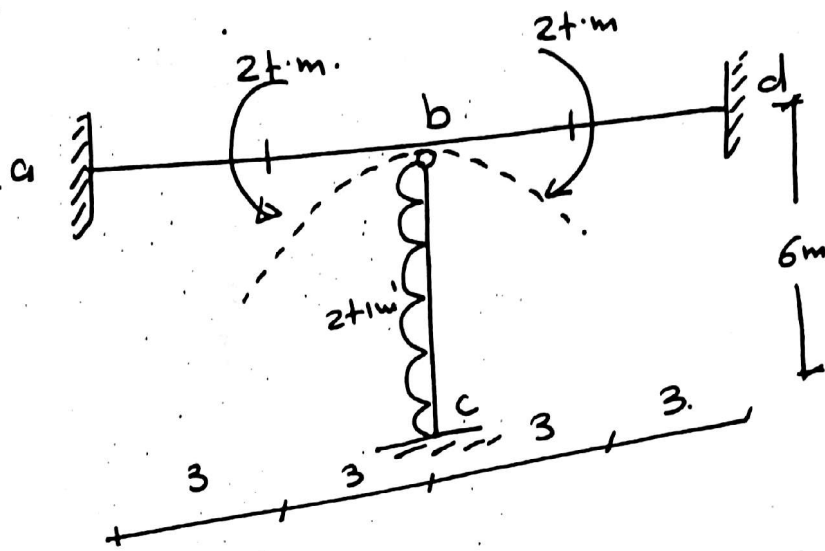




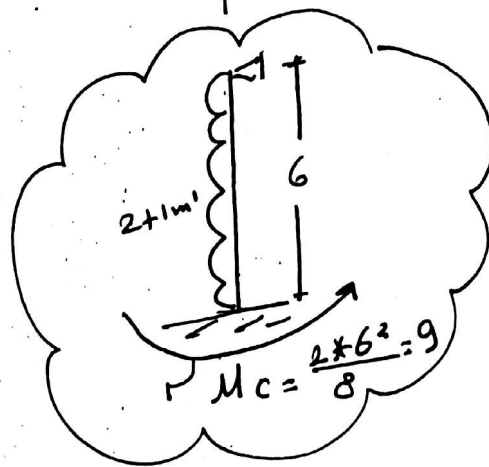
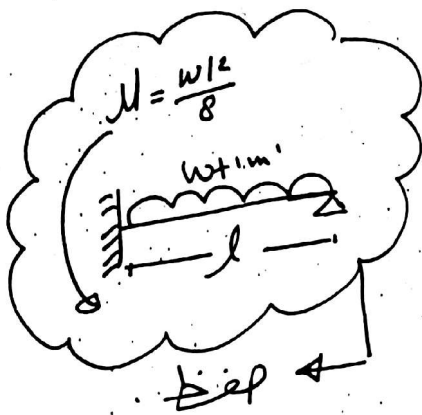
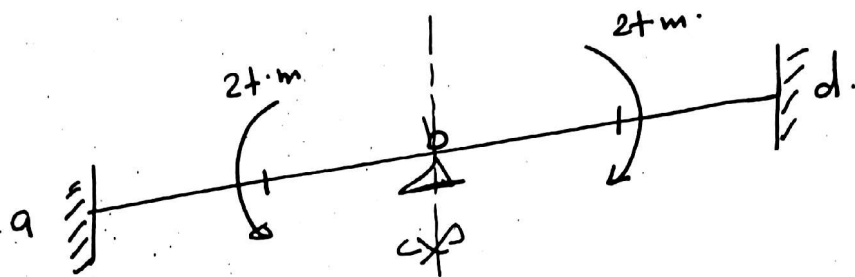
B.M.D

~*~

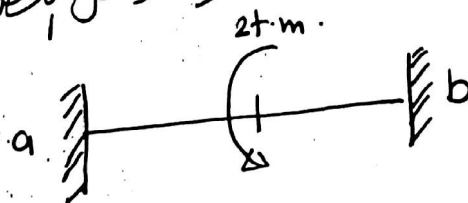
* قوتی افرد

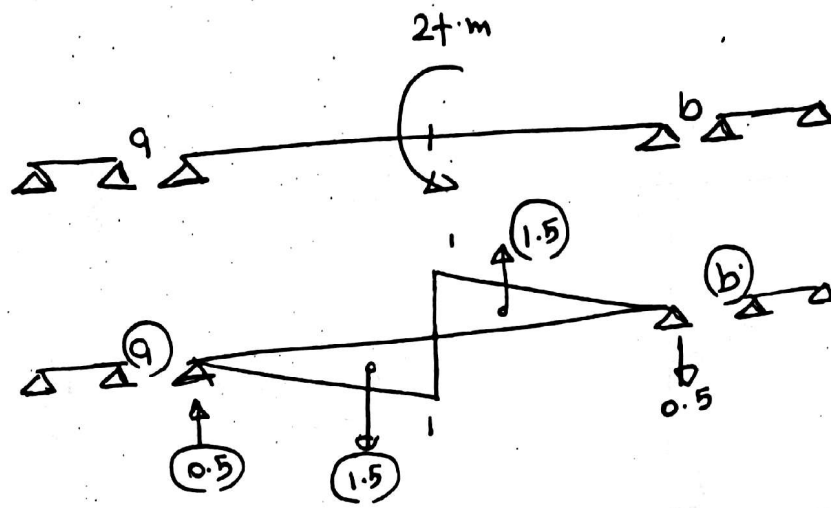


* مقروض الجرد (abd)



* الجرد (abd) نلاحظ ان وجود الكمان غير مبرر
وفي هذه الحالة تؤخذ $\frac{1}{2}$ دخل ينص





3. Mat a:

$$0 \cdot 0 + 2M_a(0 + 6) + M_b(6) = -6[0 + 0.5]$$

$$12M_a + 6M_b = -3 \rightarrow (1)$$

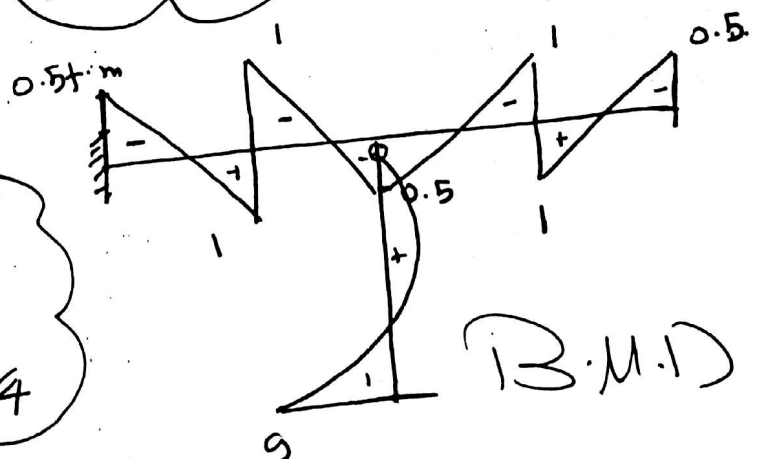
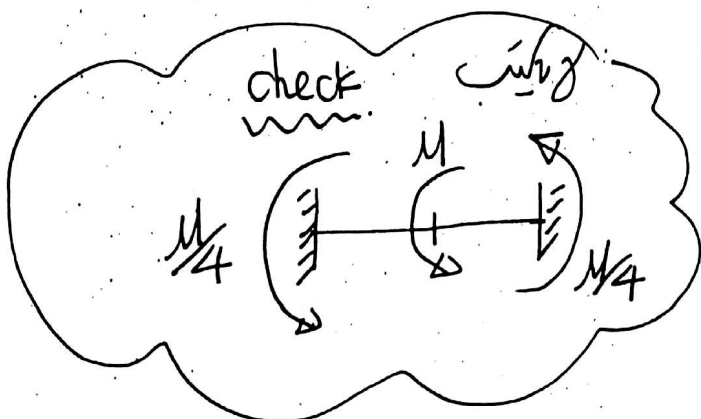
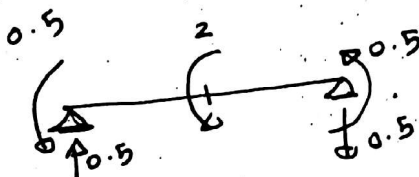
3. Mat b:

$$M_a(6) + 2M_b(6 + 0) + 0 = -6[-0.5 + 0]$$

$$6M_a + 12M_b = +3 \rightarrow (2)$$

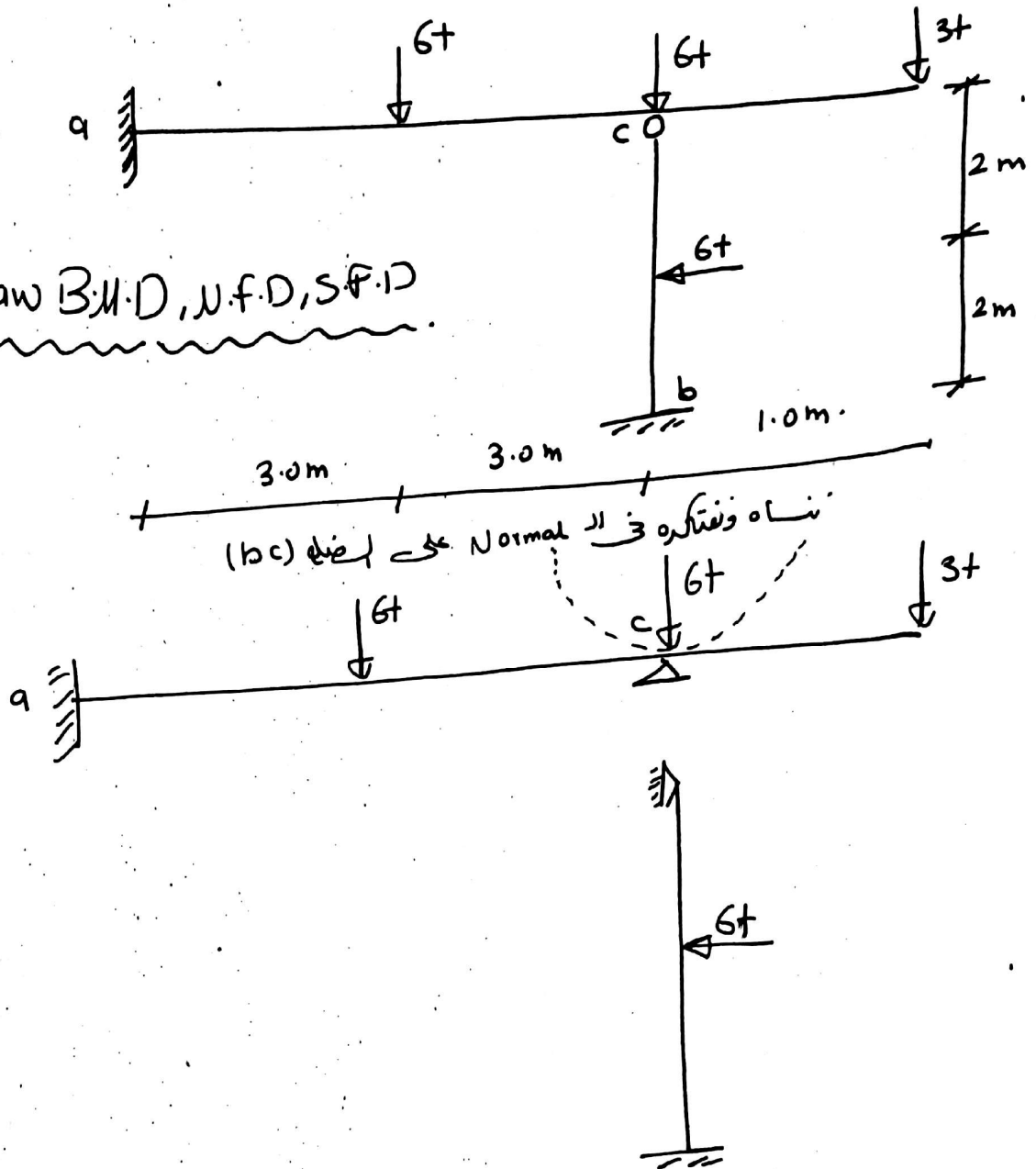
$$M_a = -0.5$$

$$M_b = +0.5$$

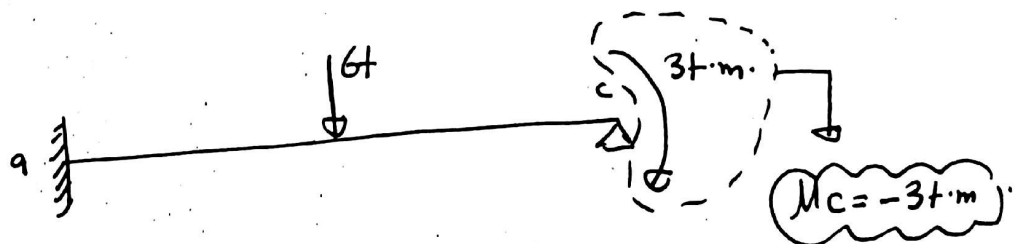


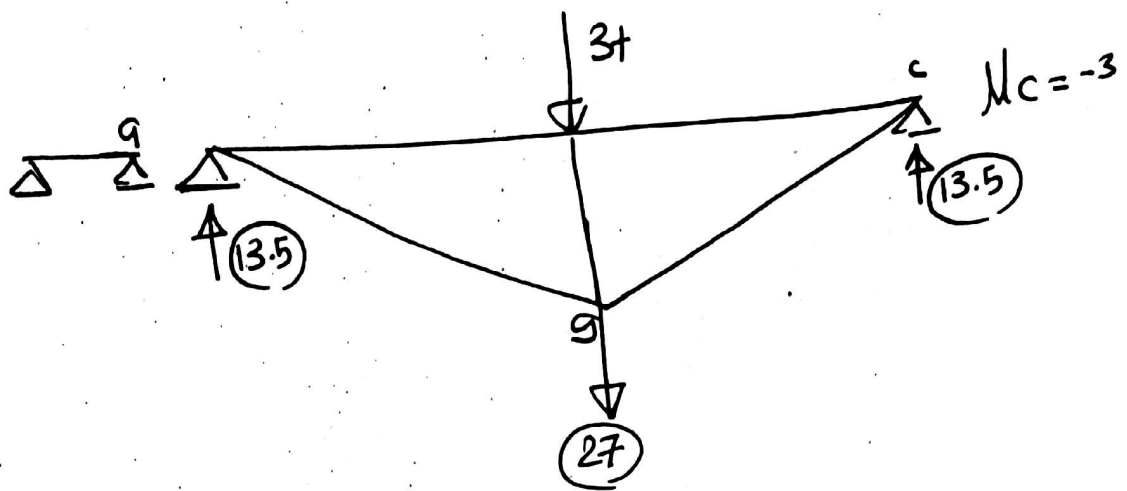
Ex:

Draw B.M.D, N.F.D, S.F.D



Part ac:





3. M at a:

$$0 \cdot 0 + 2M_a(0 + 6) + (-3)(6) = -6[0 + 13.5]$$

$$12M_a = -63$$

$$\therefore M_a = -5.25 \text{ t.m}$$

Part bc:

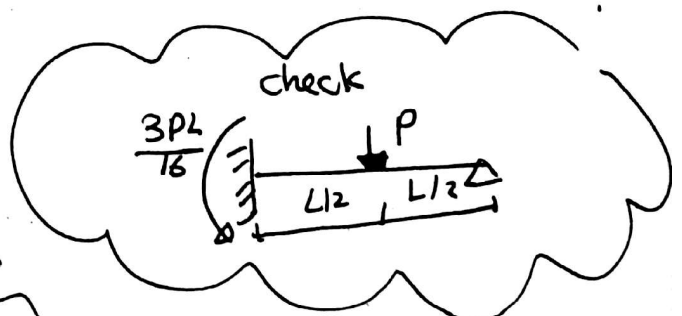
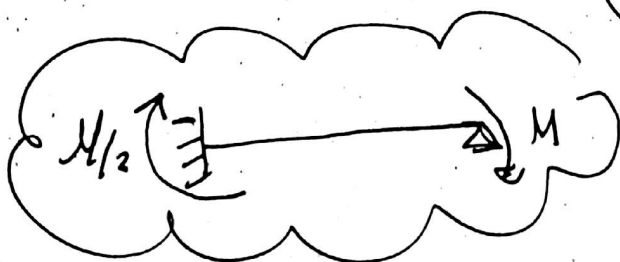
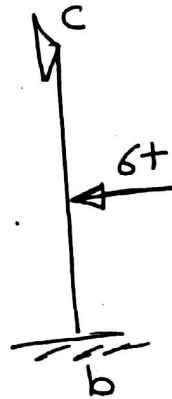
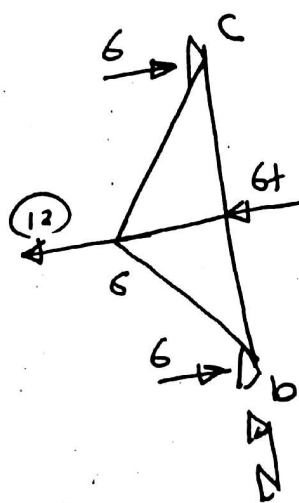
3. M at b = 0

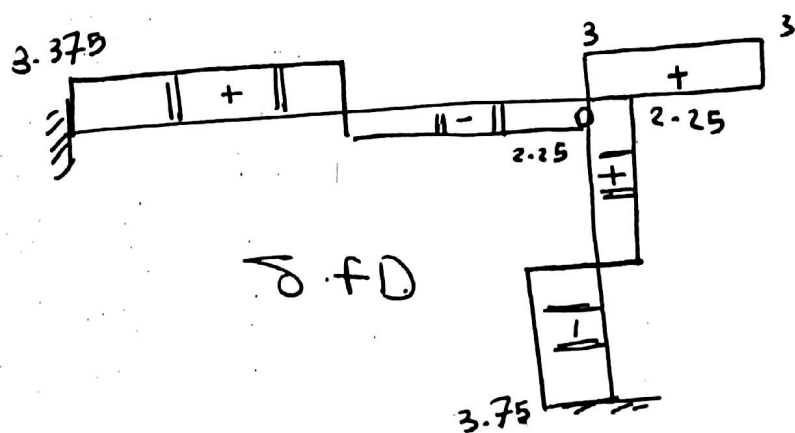
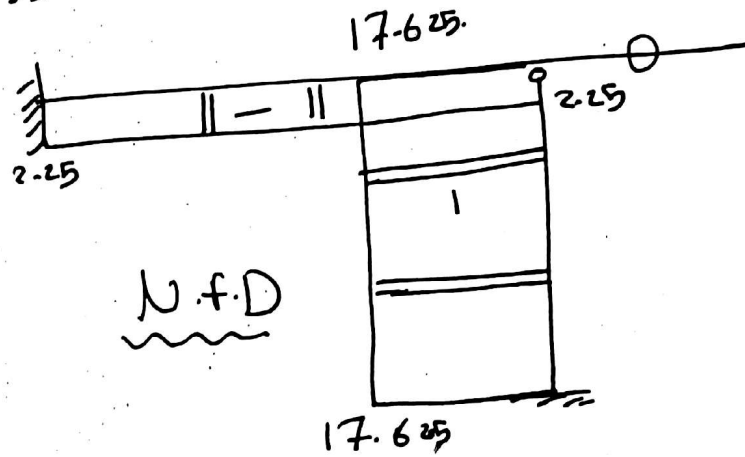
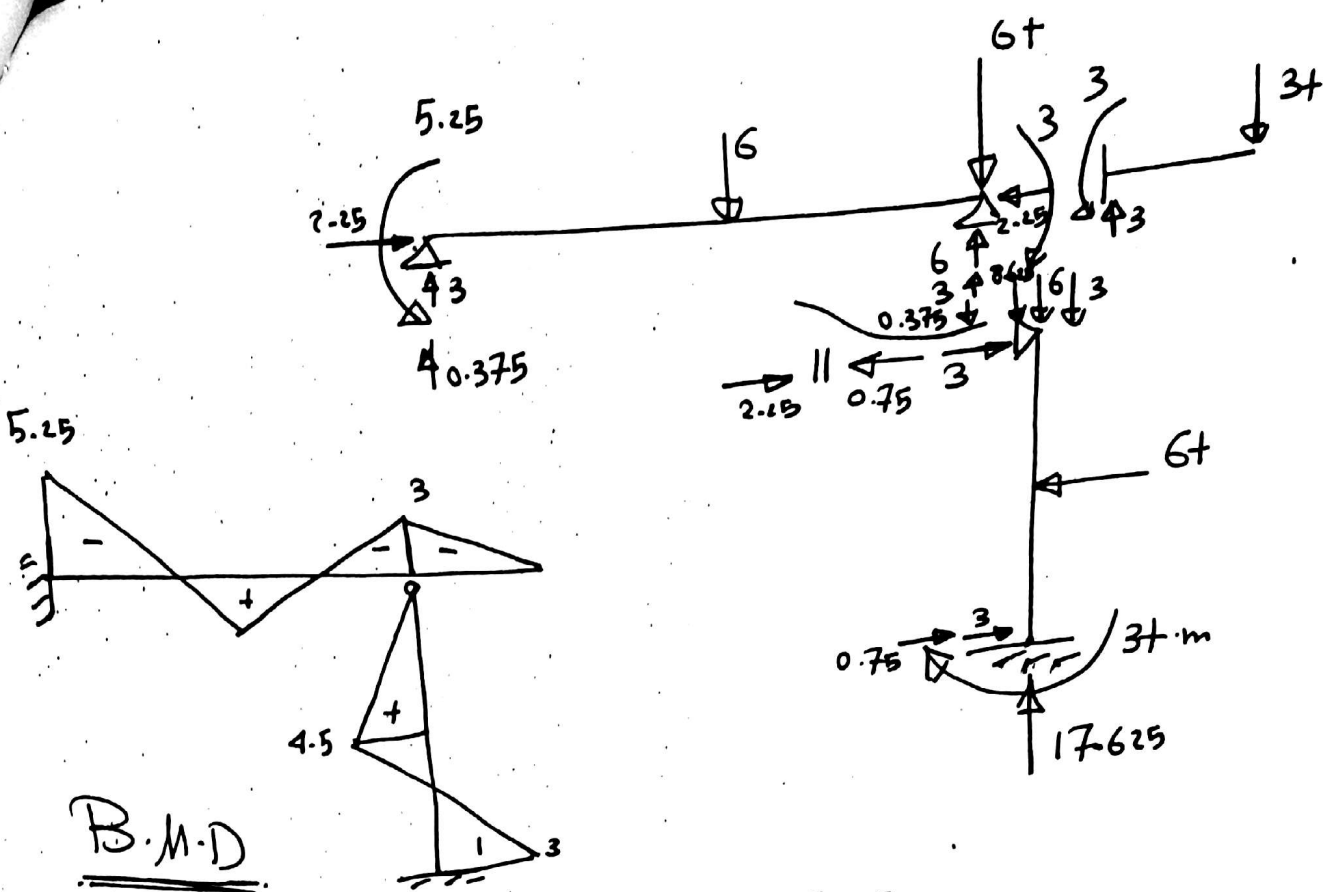
$$0 \cdot 0 + 2M_b(0 + 4) + 0$$

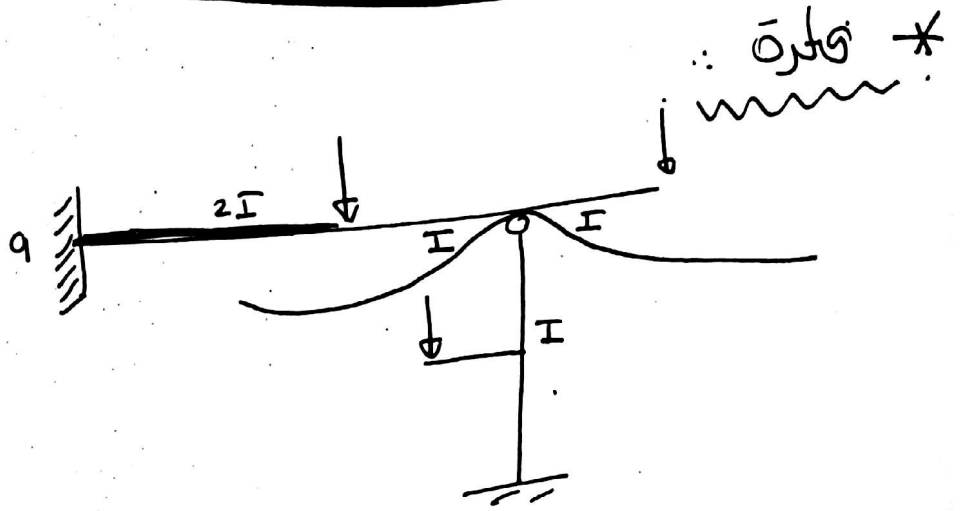
$$= -6[0 + 6]$$

$$8M_b = -36$$

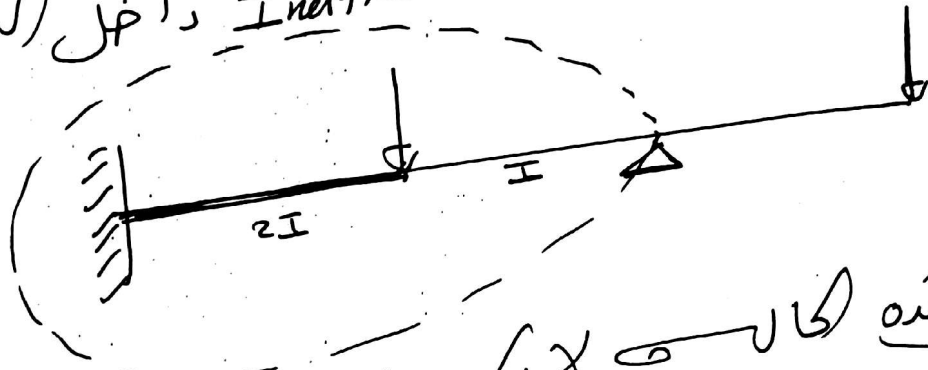
$$\therefore M_b = -4.5 \text{ t.m}$$







نلاحظ اننا عند فصل النصفين
يوجد اختلاف ما ار
Inertia داخل الجدران



* وفي هذه الحالة لا يكون اكل بار
دائمًا بار (consistent) والجزء الذي تحت يمين

عاري بار
(3 Meq)
3 Meq