

M R
Ahmed Mahdy



فيزياء	استاتيكا
دوائر كهربية	الكثرونيات
ميكانيكا الانشآت	هيدروليكا

مدرس خصوصي

حضورى

اونلاين

بحصل الطالب علي

مقاطع فيديو هات لشرح المقرر بشكل وافى

ملخص للمادة Pdf للمذكرة واطراجة

محاضرات مباشرة علي برنامج زووم

مناقشة الأجزاء الغير مفهومة

تواصل مستمر مع معلم المادة



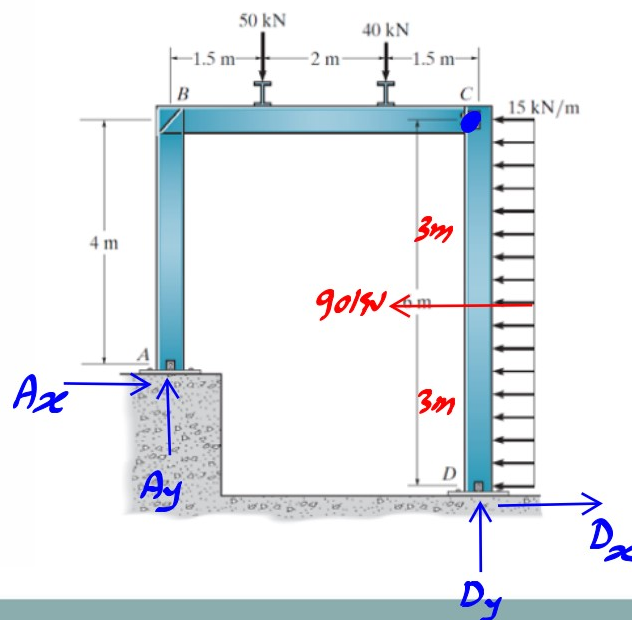
للتواصل

0567630097

0565657741

Problem 4

Draw Normal force, shear force and Bending moment Diagram



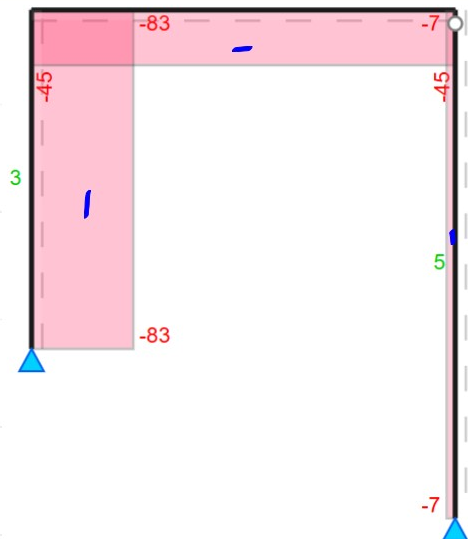
$$\sum M_{hl} = -90 \times 3 + D_x \times 6 = 0 \Rightarrow D_x = 45 \text{ kN} \rightarrow$$

$$\sum f_x = A_x - 90 + 45 = 0 \Rightarrow A_x = 45 \text{ kN} \rightarrow$$

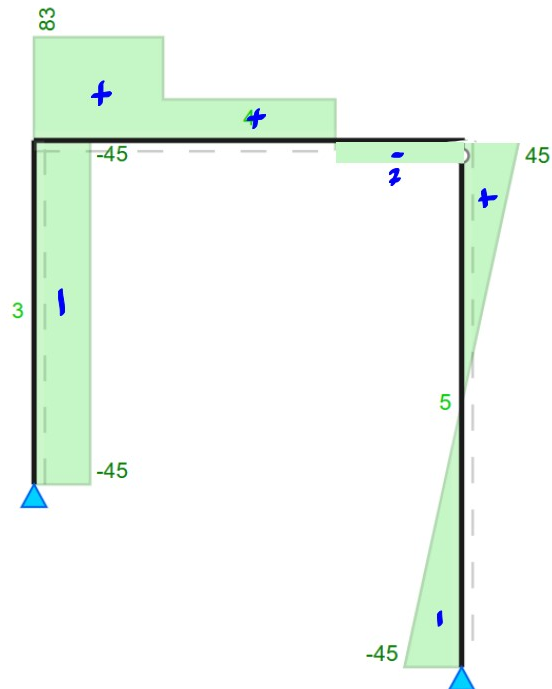
$$\sum M_{C_{left}} = 40 \times 1.5 + 50 \times 3.5 + 45 \times 4 - A_y \times 5 = 0$$

$$A_y = 83 \text{ kN} \uparrow$$

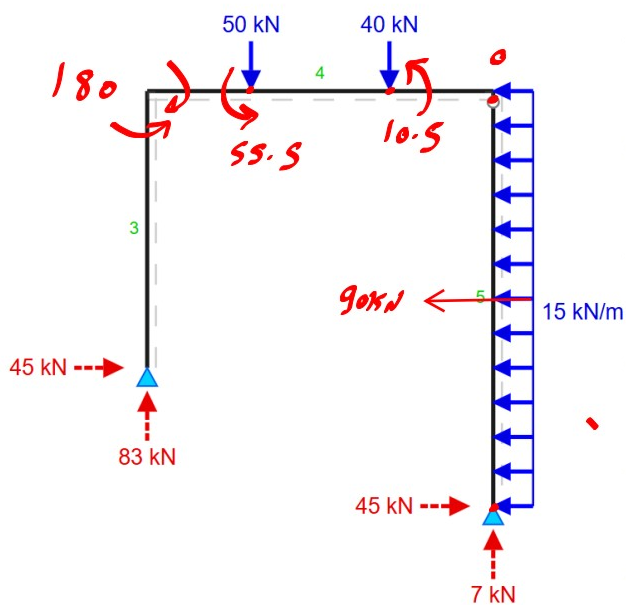
$$\sum f_y = 83 - 50 - 40 + D_y = 0 \Rightarrow D_y = 7 \text{ kN} \uparrow$$



A. f-D



S. f-D



B. r-D

Problem 5

Draw Normal force, shear force and Bending moment Diagram

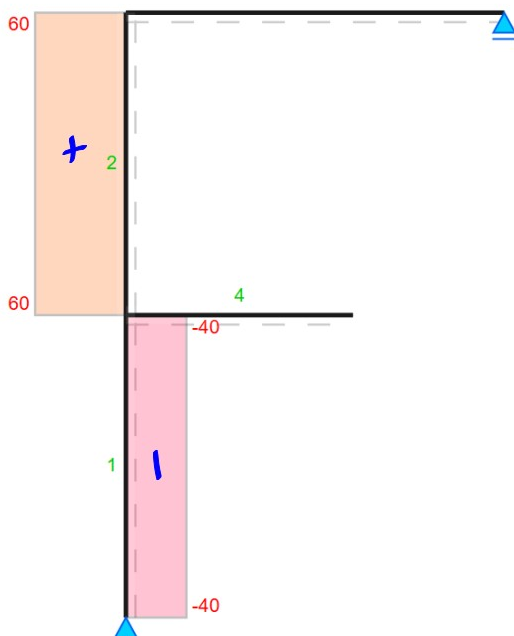
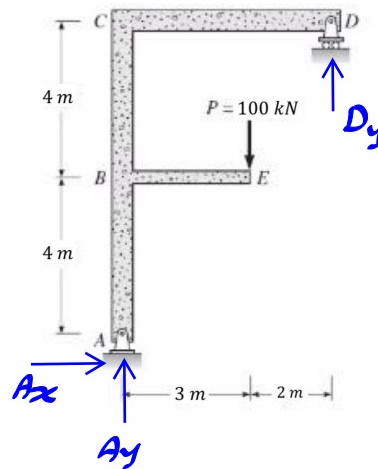
$$\sum f_x = A_x = 0$$

$$\sum M_A = -100 \times 3 - D_y \times 5 = 0$$

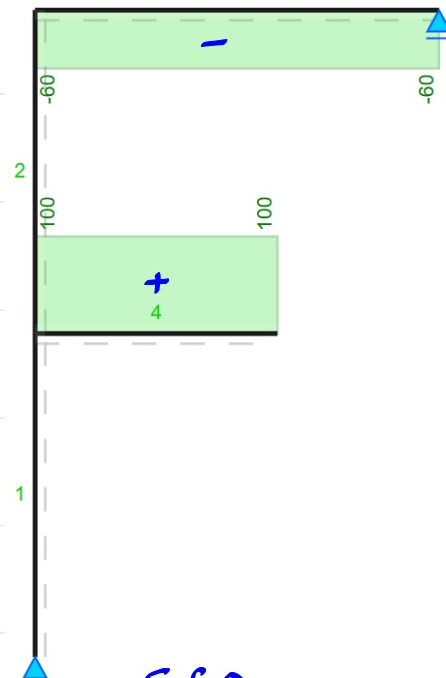
$$D_y = 60 \text{ kN} \uparrow$$

$$\sum f_y = A_y - 100 + D_y = 0$$

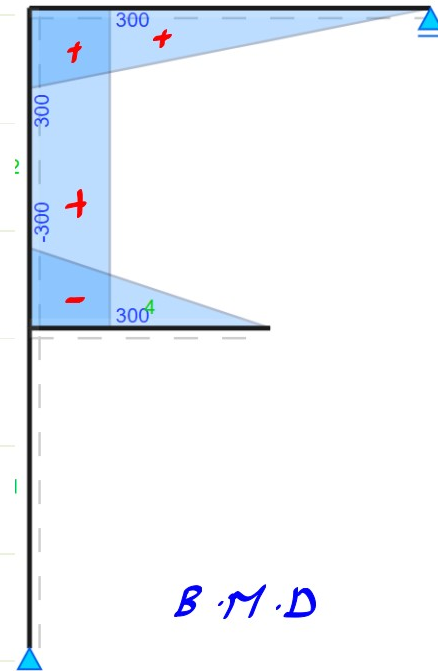
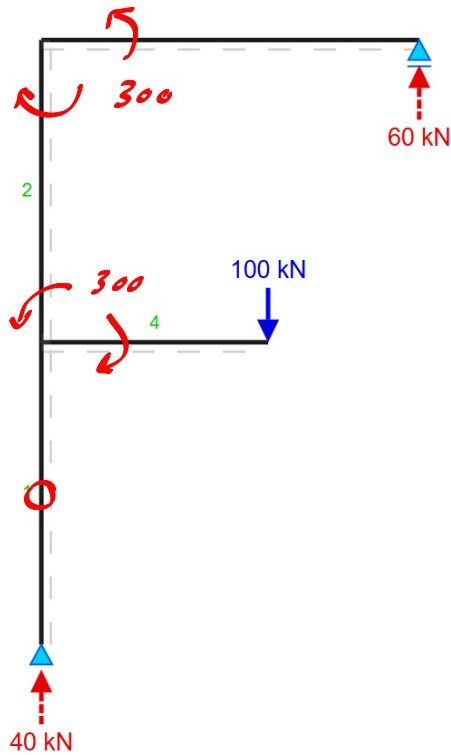
$$A_y = 40 \text{ kN} \uparrow$$



A.F.D



S.F.D



Problem 6

Draw Normal force, shear force and Bending moment Diagram

$$\sum f_x = -A_x + 4 = 0$$

$$A_x = 4 \text{ kip}$$

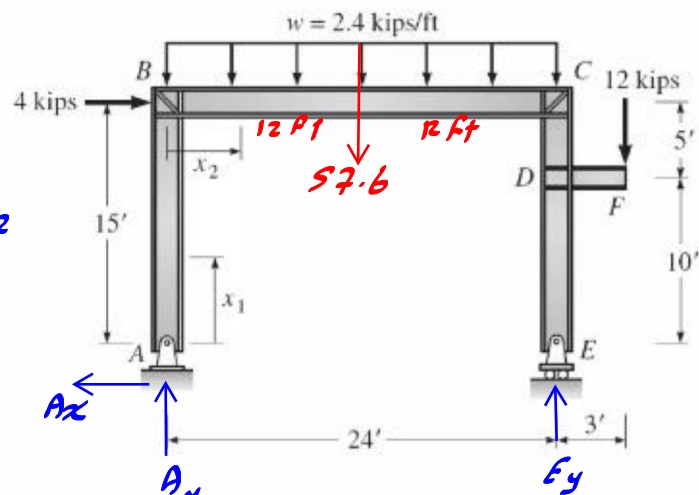
$$\sum M_A = -4 \times 15 - 57.6 \times 12$$

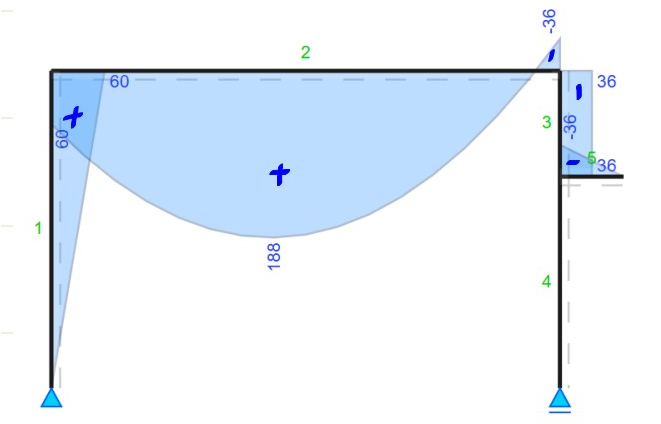
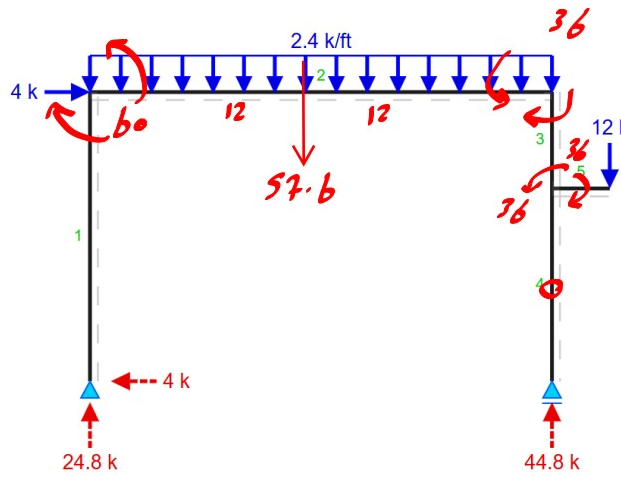
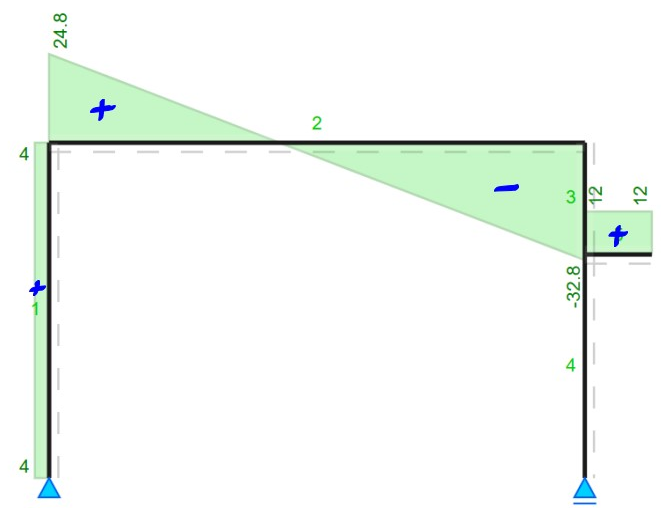
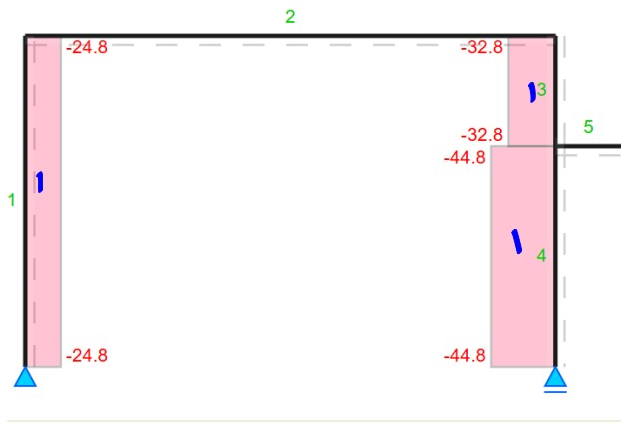
$$-12 \times 27 + E_y \times 24 = 0$$

$$E_y = 44.8 \text{ kip}$$

$$\sum f_y = A_y - 57.6 + 44.8 - 12 = 0$$

$$A_y = 24.8 \text{ kip}$$

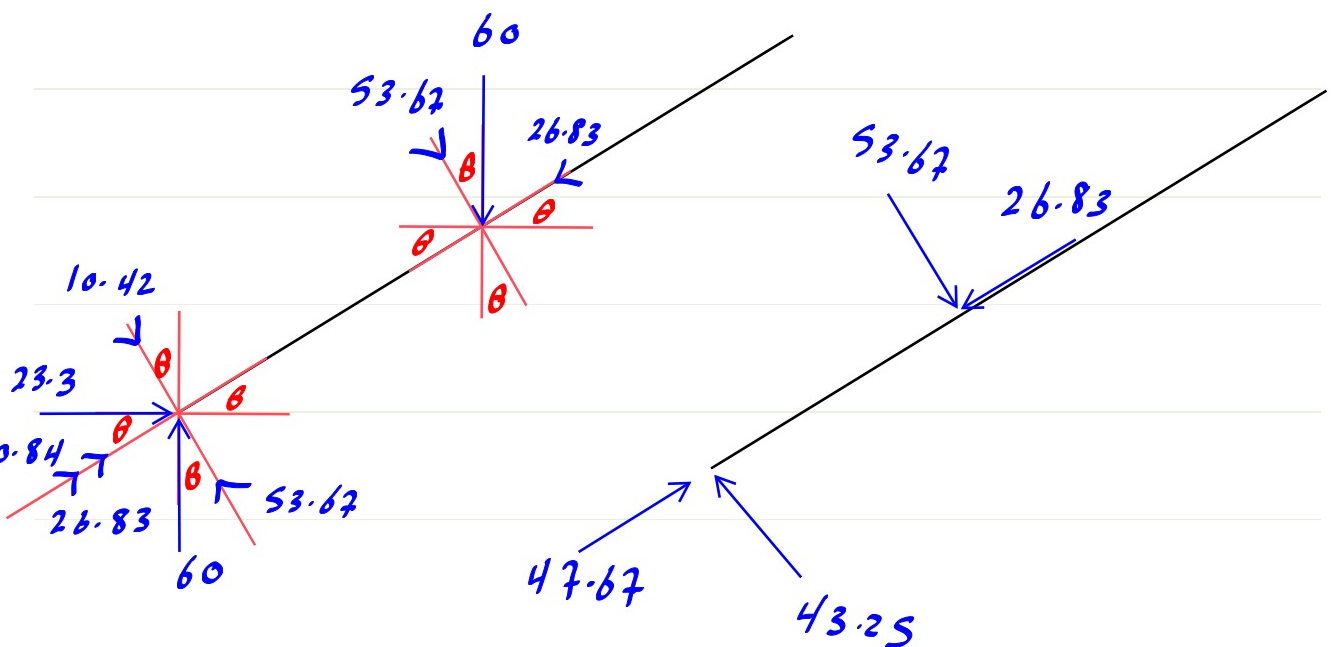
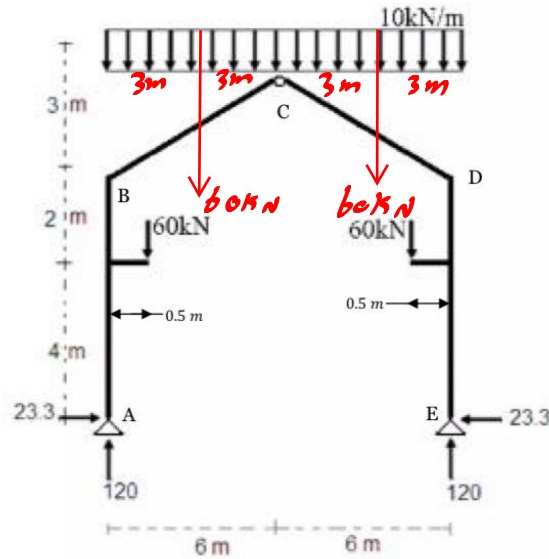


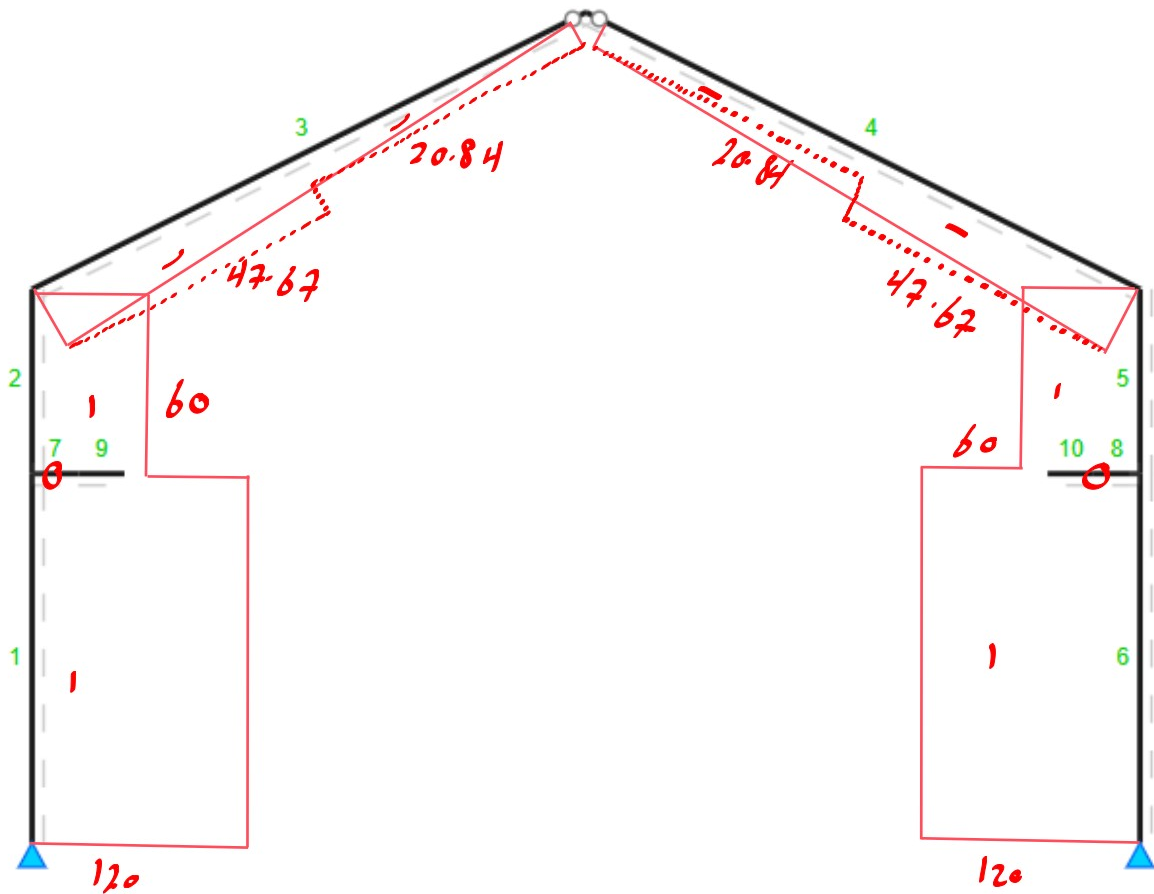
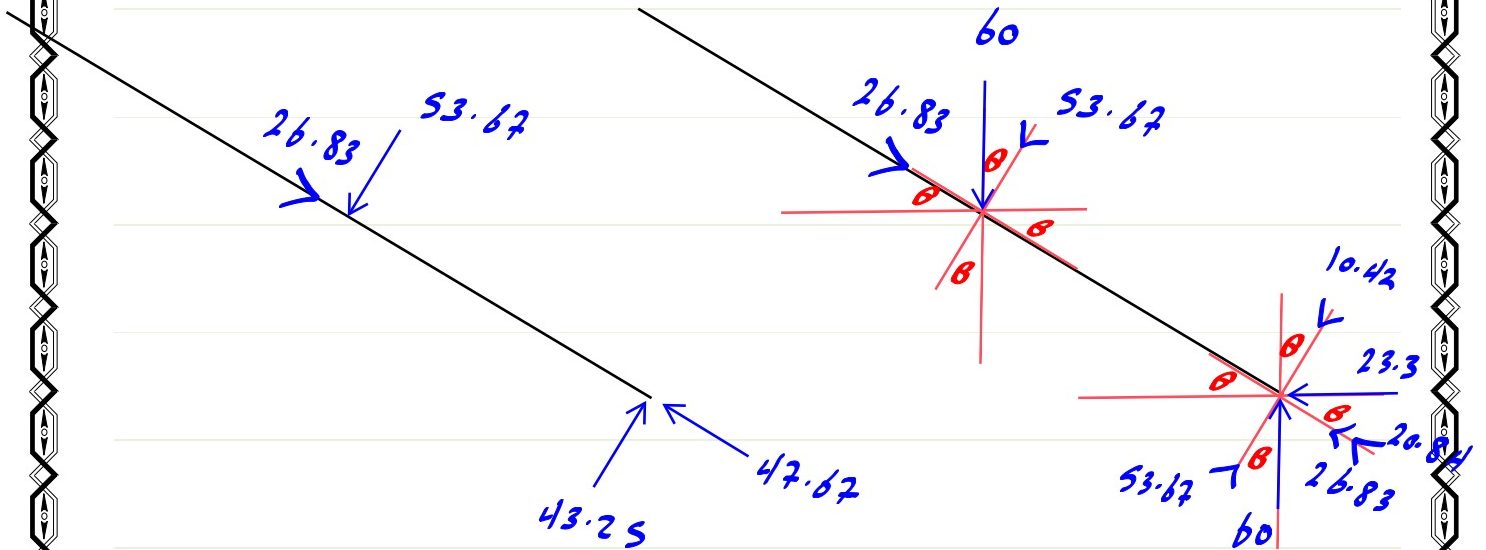


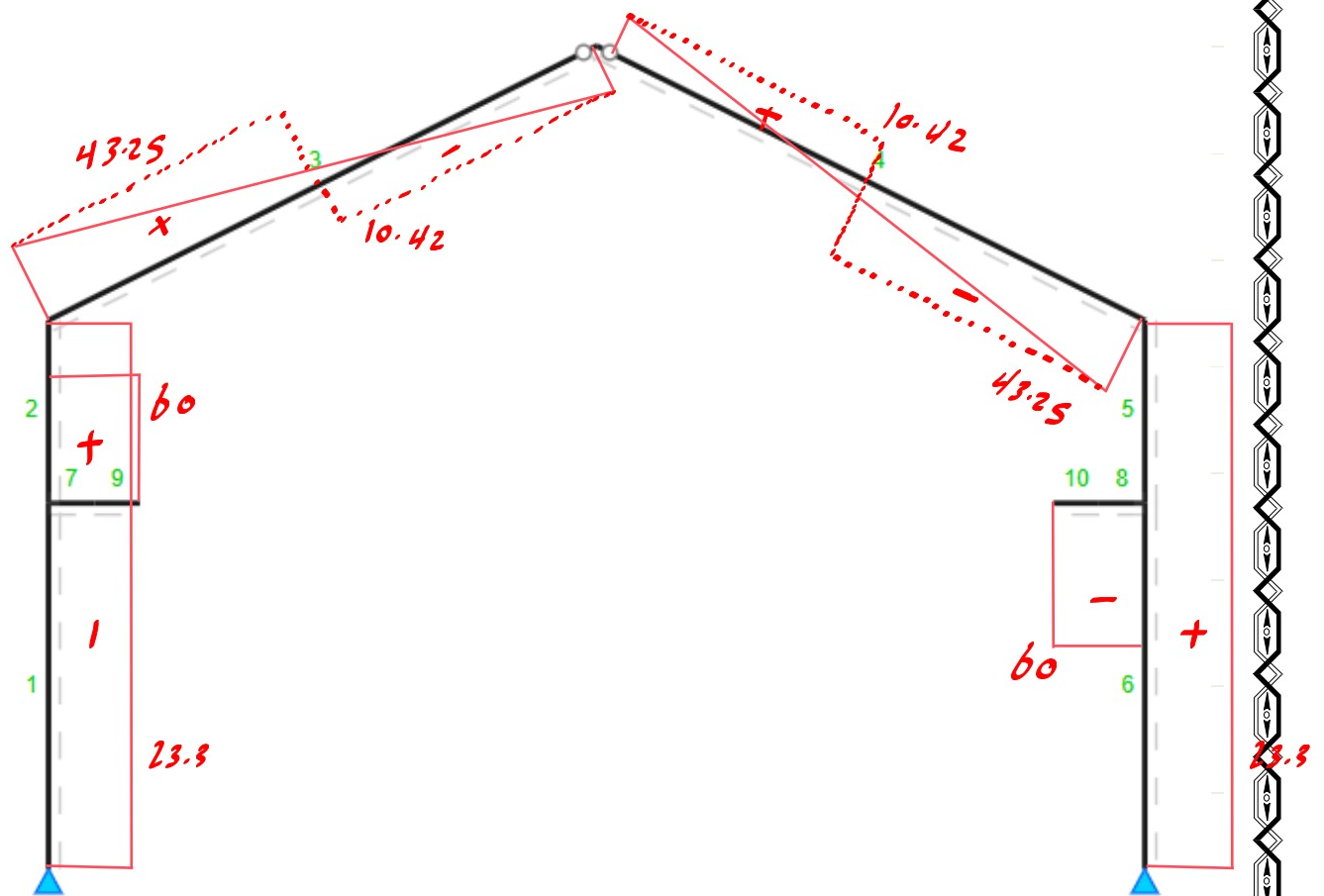
Example 9

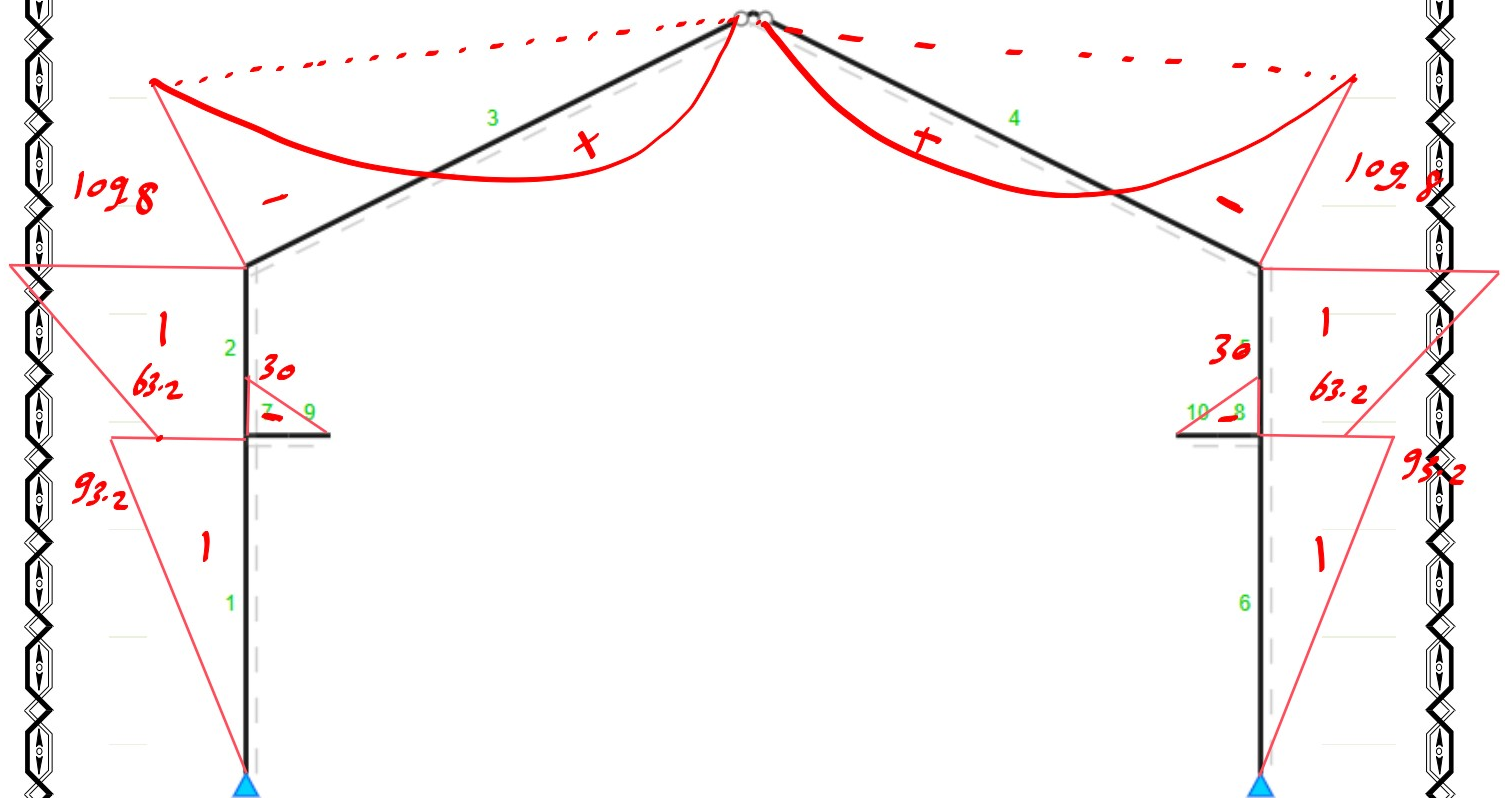
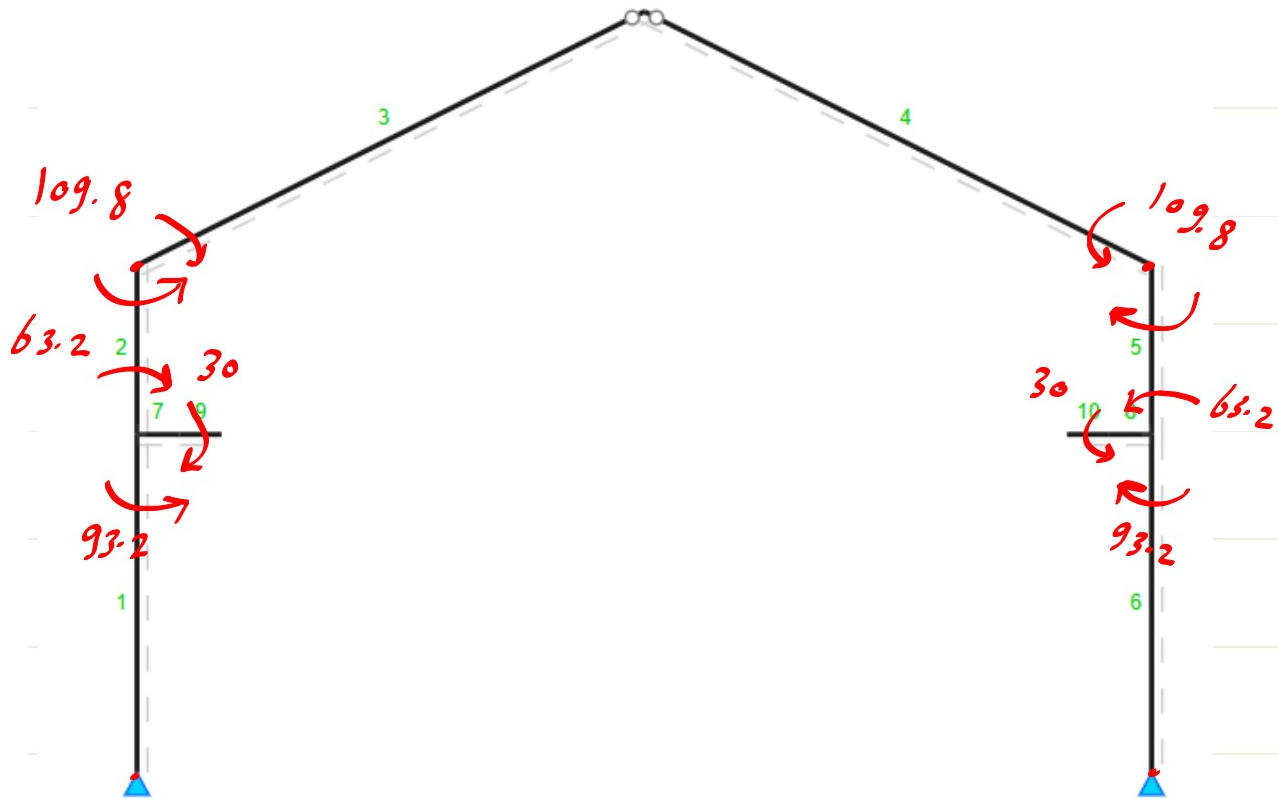
Draw the Normal, Shear and moment diagrams.

$$\begin{aligned} \sin \theta &= \frac{1}{\sqrt{5}} \\ \cos \theta &= \frac{2}{\sqrt{5}} \end{aligned}$$

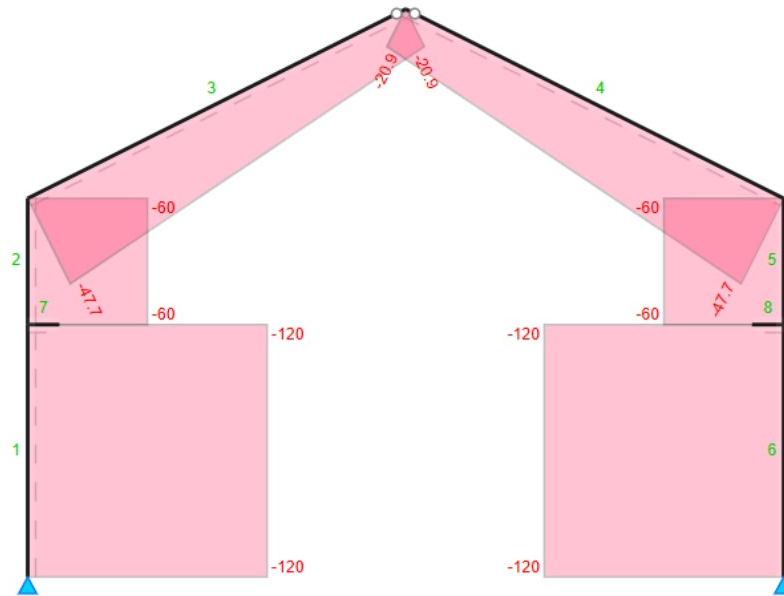




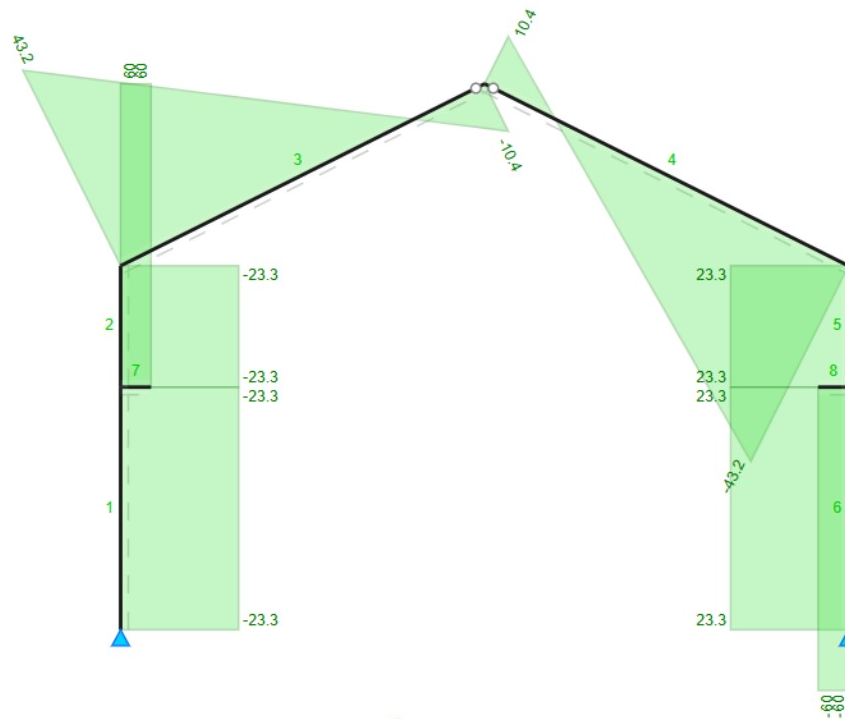




تأثير اكل باهر نامج



A. F. D



S. F. D

