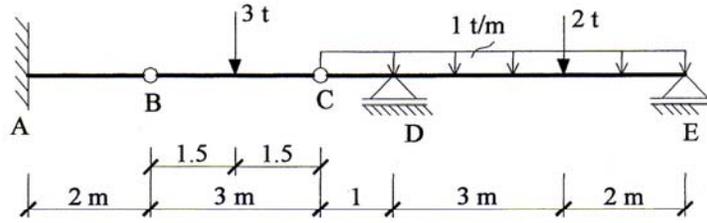


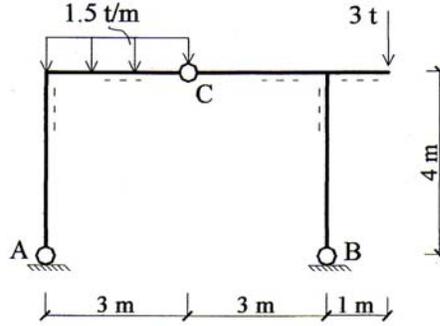
**Yapı Statik  
Yılıçi Sınavı**

1)



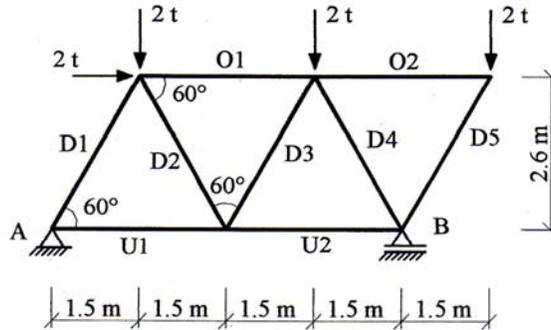
Şekilde ölçüleri ve yükleme durumu verilen mafsallı sürekli kirişin T ve M iç kuvvet diyagramlarını çiziniz.

2)



Şekilde ölçüleri ve yükleme durumu verilen üç mafsallı çerçevenin N, T ve M iç kuvvet diyagramlarını çiziniz.

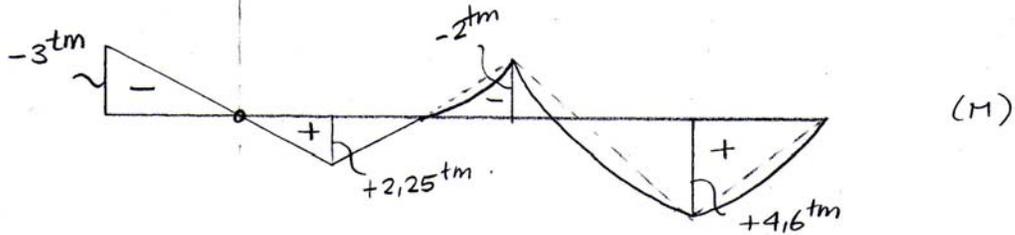
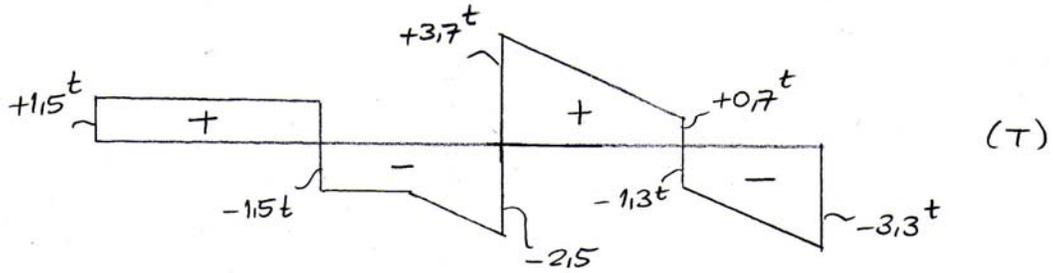
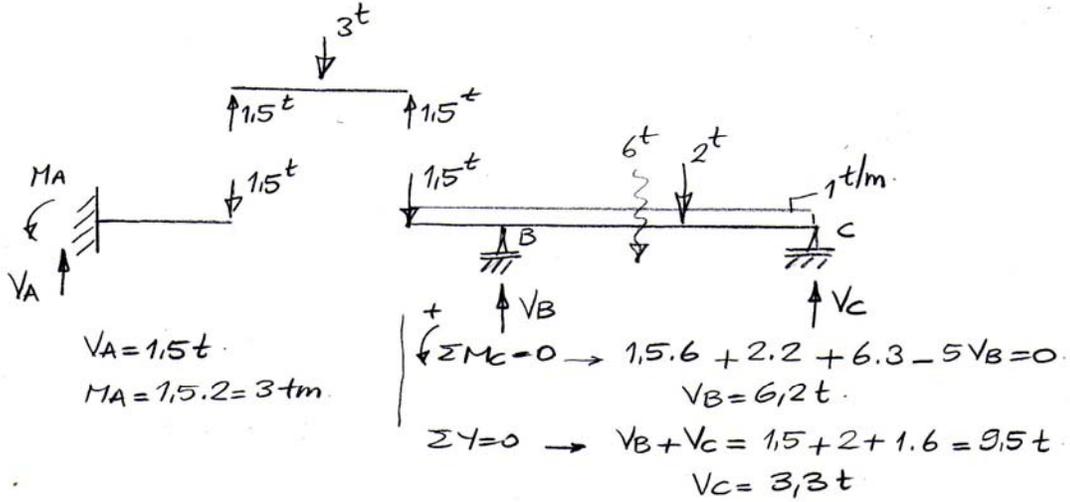
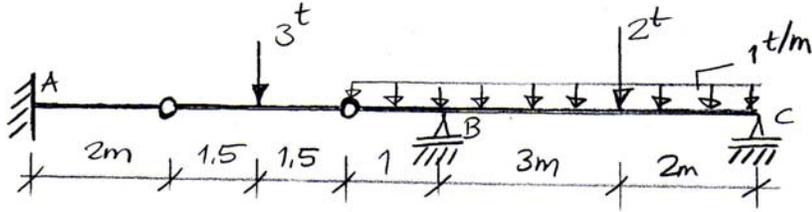
3)



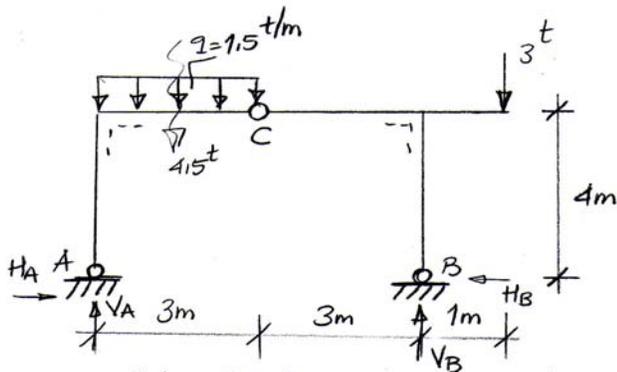
Şekilde ölçüleri ve yükleme durumu verilen kafes sistemde bütün çubuk kuvvetlerini CREMONA yöntemi ile hesaplayınız. Sonuçları bir tabloda özetleyiniz.

# CEVAPLAR

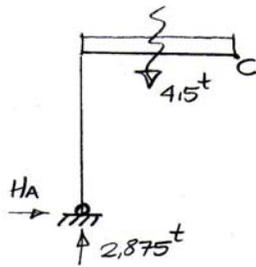
1-)



2-)



$$\begin{aligned} \sum M_B = 0 &\rightarrow 6V_A - 4.5 \cdot 4.5 + 3 \cdot 1 = 0 \rightarrow V_A = 2.875 \text{ t} \\ \sum Y = 0 &\rightarrow V_A + V_B = 4.5 + 3 = 7 \rightarrow V_B = 4.125 \text{ t} \end{aligned}$$

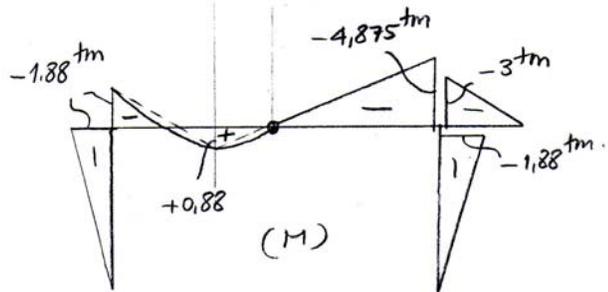
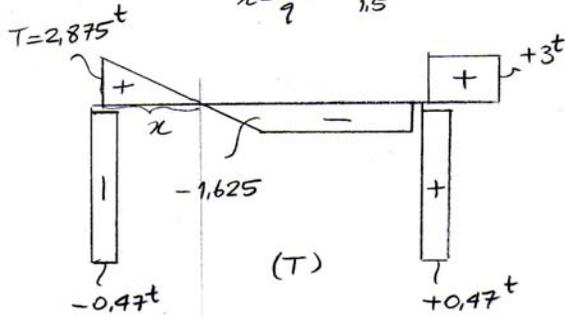
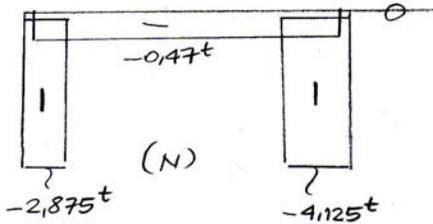


$$\sum M_C = 0 \rightarrow H_A \cdot 4 - 2.875 \cdot 3 + 4.5 \cdot 1.5 = 0$$

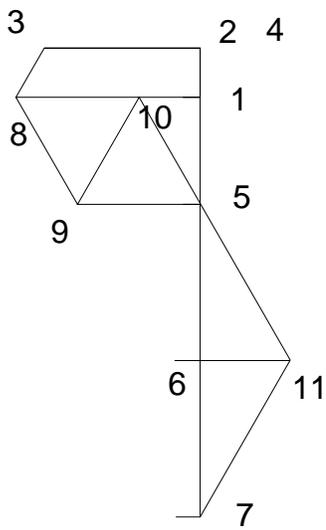
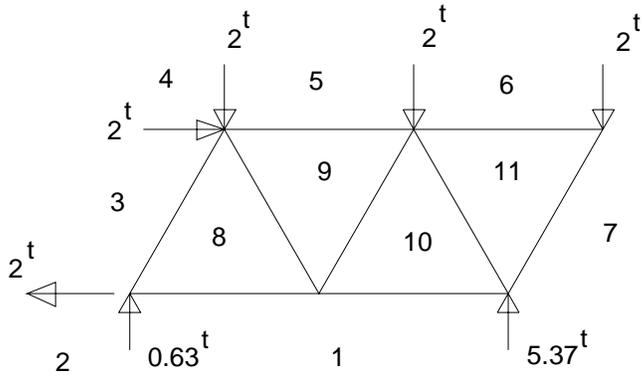
$$H_A = 0.47 \text{ ton}$$

$$\sum X = 0 \rightarrow H_A - H_B = 0 \rightarrow H_B = H_A = 0.47 \text{ ton}$$

$$x = \frac{T}{q} = \frac{2.875}{1.5} = 1.92 \text{ m}$$



3)



	çekme	basınç
O1		1.57
O2	1.15	
U1	2.36	
U2	0.78	
D1		0.73
D2		1.58
D3	1.58	
D4		3.90
D5		2.30