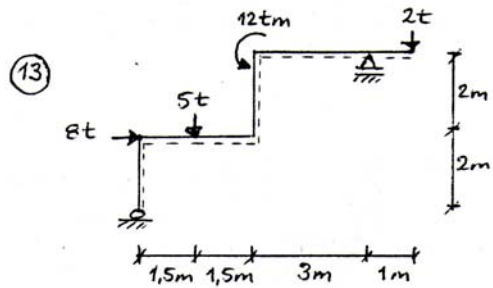
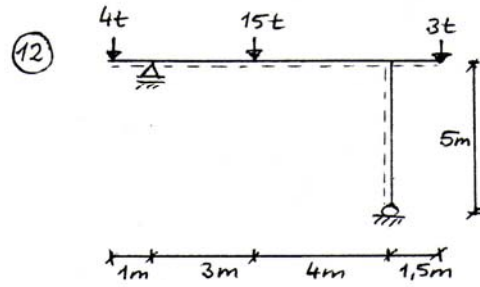
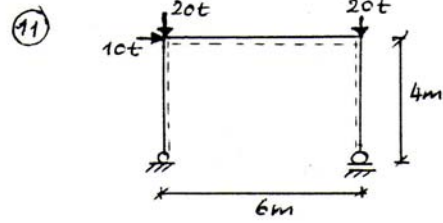
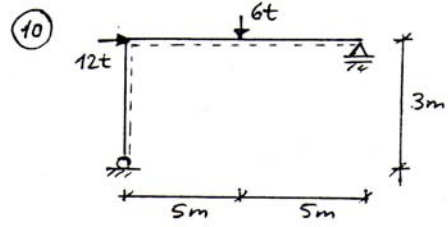
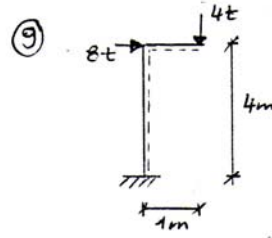
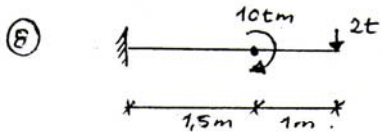
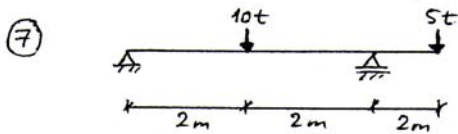
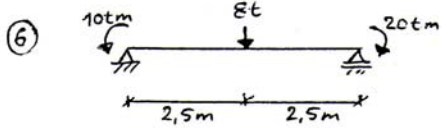
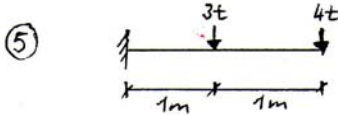
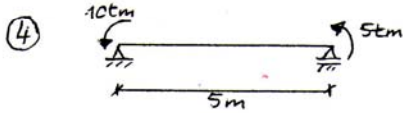
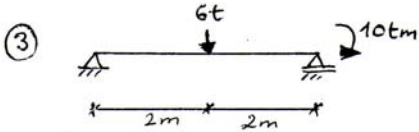
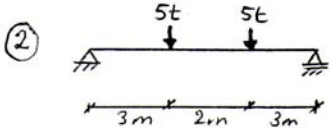
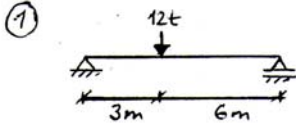


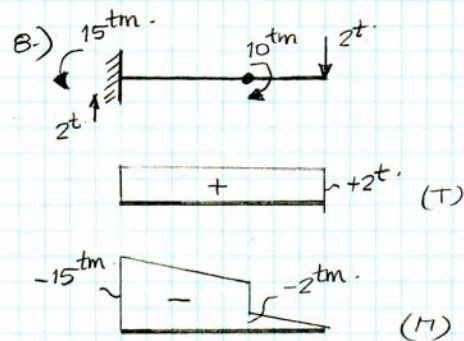
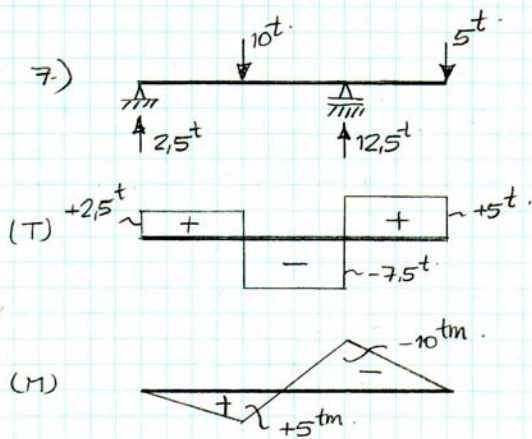
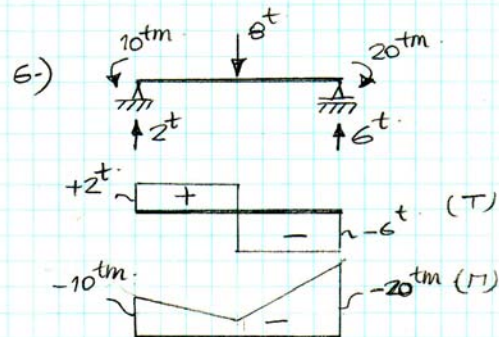
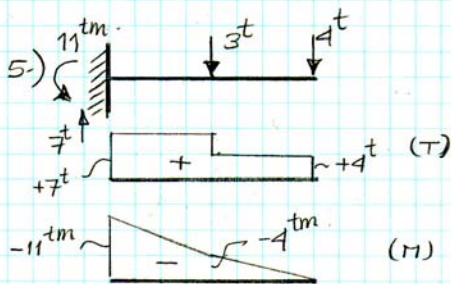
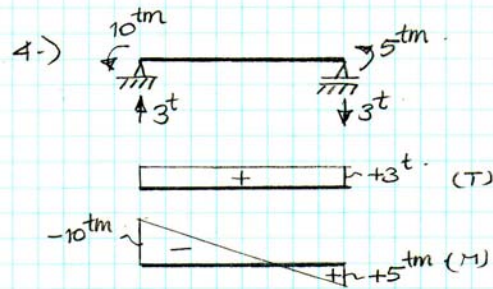
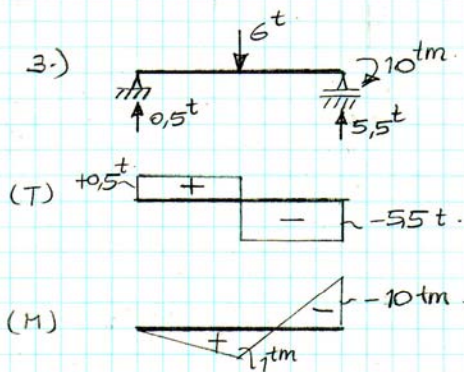
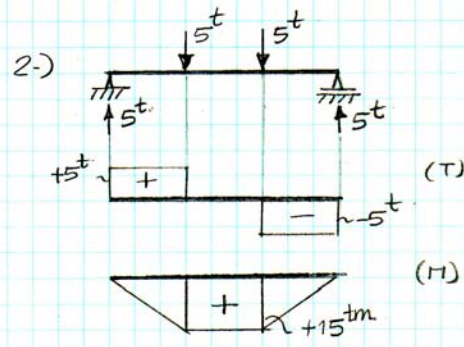
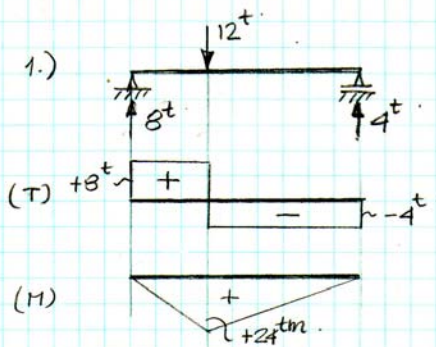
# UYGULAMA 1 İÇ KUVVET DİYAGRAMLARI-1



Verilen sistemlerde,  
kesit tesiri diyagramlarını  
(N,T,M) çiziniz.

# MUKAVEMET UYGULAMA - 1 ÇÖZÜMLERİ

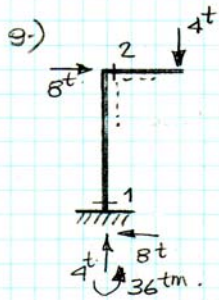
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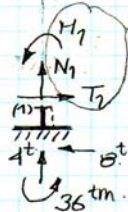


# MUKAVEMET UYGULAMA-1 ÇÖZÜMLERİ

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(1) kesitindeki iç kuvvetler.



Bakış yönüne göre yerleştirilen pozitif iç kuvvetler. denge denklemleri ile hesaplanır.

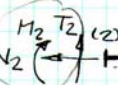
$$\sum X=0 \rightarrow T_1=8t$$

$$\sum Y=0 \rightarrow N_1=-4t$$

$$\sum M_1=0 \rightarrow M_1=-36 \text{ tm}$$

(2) kesitindeki iç kuvvetler.

bakış yönüne göre pozitif iç kuvvetler

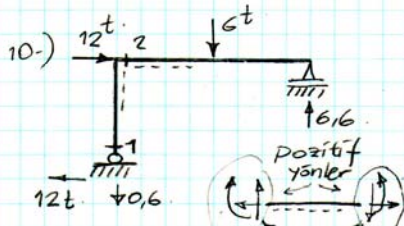
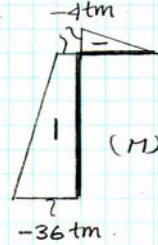
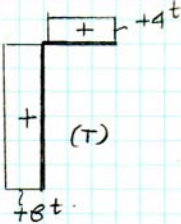
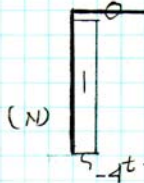


$$\sum X=0 \rightarrow N_2=0$$

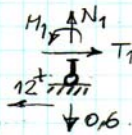
$$\sum Y=0 \rightarrow T_2=4t$$

$$\sum M_2=0 \rightarrow M_2+4 \times 1=0 \rightarrow M_2=-4 \text{ tm}$$

NOT: (2) kesitin sağ taraftaki parçasını almamızı nedeni daha az işlem yaparak sonuca ulaşmaktır. Sol tarafı da alsaydık aynı sonuçlara ulaşırdık.



(1) kesitindeki iç kuvvetler.

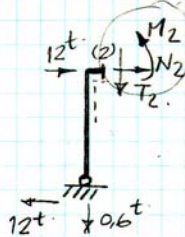


$$\sum X=0 \rightarrow T_1=12t$$

$$\sum Y=0 \rightarrow N_1=0.6t$$

$$\sum M_1=0 \rightarrow M_1=0 \text{ (maksallı mesnette moment sıfır)}$$

(2) kesitindeki iç kuvvetler.

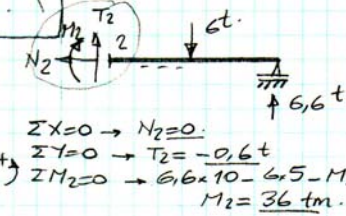


$$\sum X=0 \rightarrow N_2=0$$

$$\sum Y=0 \rightarrow T_2=-0.6t$$

$$\sum M_2=0 \rightarrow 12 \times 3 - M_2=0 \rightarrow M_2=36 \text{ tm}$$

Eğer (2) kesitin sağında ki parçanın dengesini düşünsaydık.

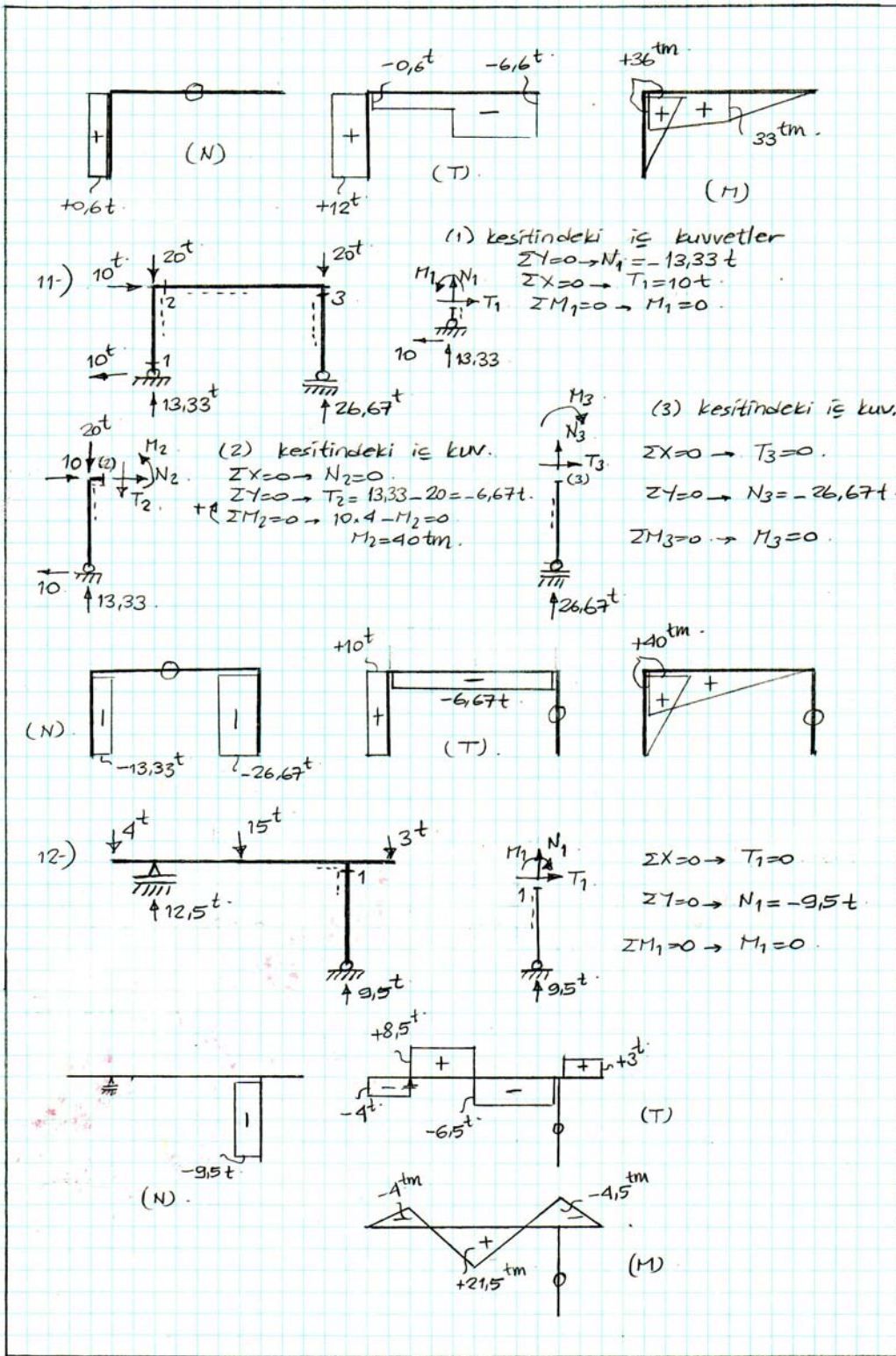


$$\sum X=0 \rightarrow N_2=0$$

$$\sum Y=0 \rightarrow T_2=-0.6t$$

$$\sum M_2=0 \rightarrow 6.6 \times 10 - 6.5 - M_2=0 \rightarrow M_2=36 \text{ tm}$$

DİKKAT SONUÇLAR AYNI

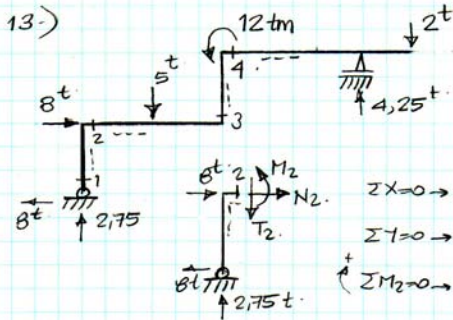




# MUKAVEMET UYGULAMA - 1 ÇÖZÜMLERİ

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$$\sum X=0 \rightarrow N_2=0$$

$$\sum Y=0 \rightarrow T_2=2,75t$$

$$\sum M_2=0 \rightarrow 8 \times 2 - M_2=0$$

$$M_2=16 \text{ tm}$$

$$\sum X=0 \rightarrow N_4=0$$

$$\sum Y=0 \rightarrow T_4=-2,25t$$

$$\sum M_4=0 \rightarrow 2 \times 4 - 4,25 \times 3 + M_4=0 \rightarrow M_4=4,75 \text{ tm}$$

$$\sum X=0 \rightarrow T_1=8t$$

$$\sum Y=0 \rightarrow N_1=-2,75t$$

$$\sum M_1=0 \rightarrow M_1=0$$

$$\sum X=0 \rightarrow T_3=0$$

$$\sum Y=0 \rightarrow N_3=2,25t$$

$$\sum M_3=0 \rightarrow 2 \times 4 - 4,25 \times 3 - 12 + M_3=0$$

$$M_3=16,75 \text{ tm}$$

