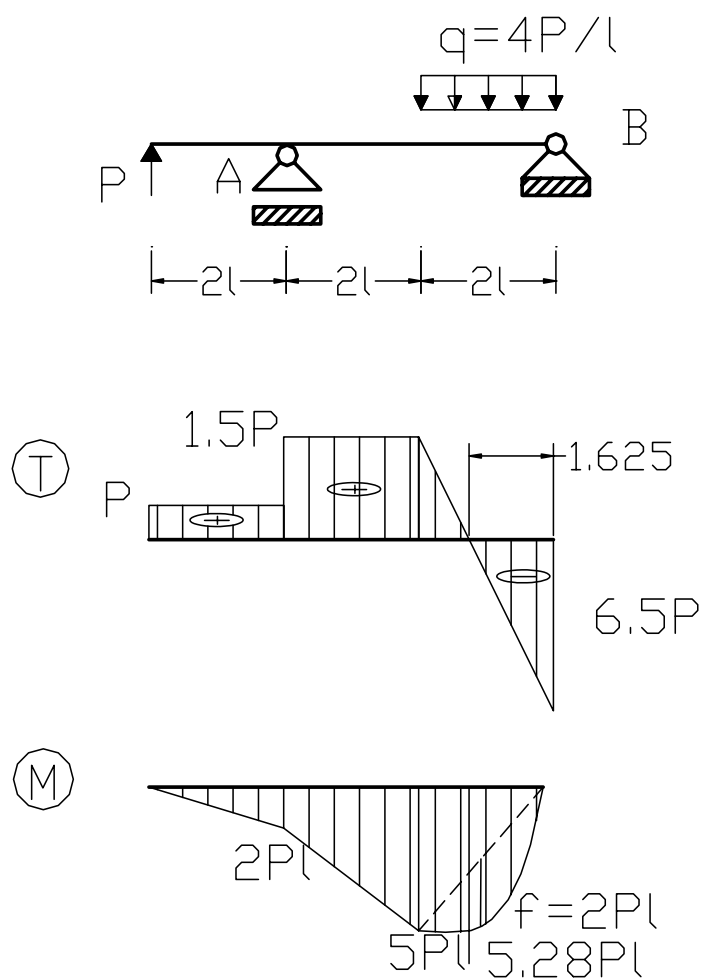


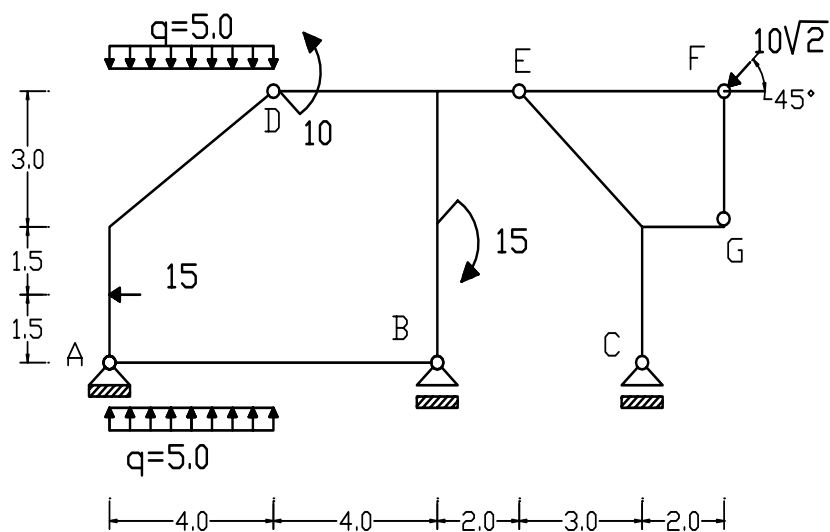
Chapter 1

Januar 2007

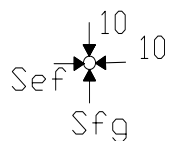
1.1 Uslovni zadatak



1.2 Prvi zadatak



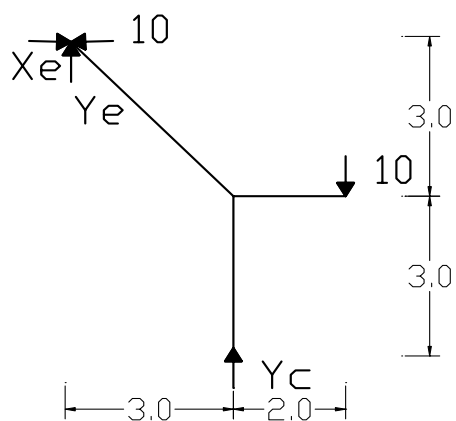
Čvor F:



$$\sum X = 0 : S_{EF} = 10$$

$$\sum Y = 0 : S_{FG} = 10$$

Deo E-G-C:



$$\sum M_E = 0 : 10 \cdot 5 - Y_C \cdot 3 = 0$$

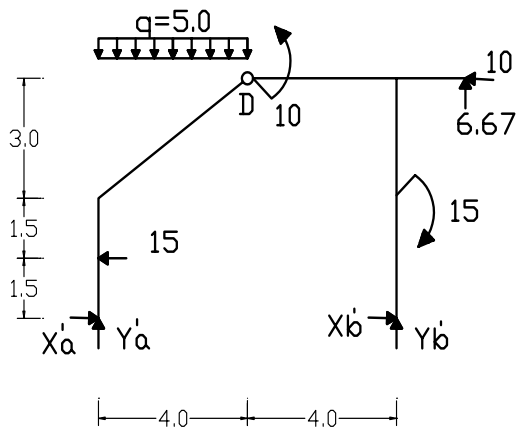
$$\Rightarrow Y_C = 16.67$$

$$\sum Y = 0 : Y_E + 16.67 - 10 = 0$$

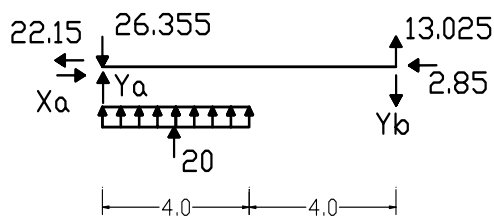
$$\Rightarrow Y_E = -6.67$$

$$\sum X = 0 : X_E = 10$$

Deo A-D-B:



Deo A-B:



$$\begin{aligned}\sum M_A &= 0 : \\ &-15 \cdot 1.5 + 20 \cdot 2 - 10 - 6.67 \cdot 10 \\ &-10 \cdot 6 + 15 - Y'_B \cdot 8 = 0 \\ \Rightarrow Y'_B &= -13.025\end{aligned}$$

$$\begin{aligned}\sum M_D &= 0 : \\ &-10 - 6.67 \cdot 6 + 15 + 13.025 \cdot 4 - X'_B \cdot 6 = 0 \\ \Rightarrow X'_B &= 2.85\end{aligned}$$

$$\begin{aligned}\sum Y &= 0 : \\ Y'_A - 20 + 6.67 - 13.025 &= 0 \\ \Rightarrow Y'_A &= 26.355\end{aligned}$$

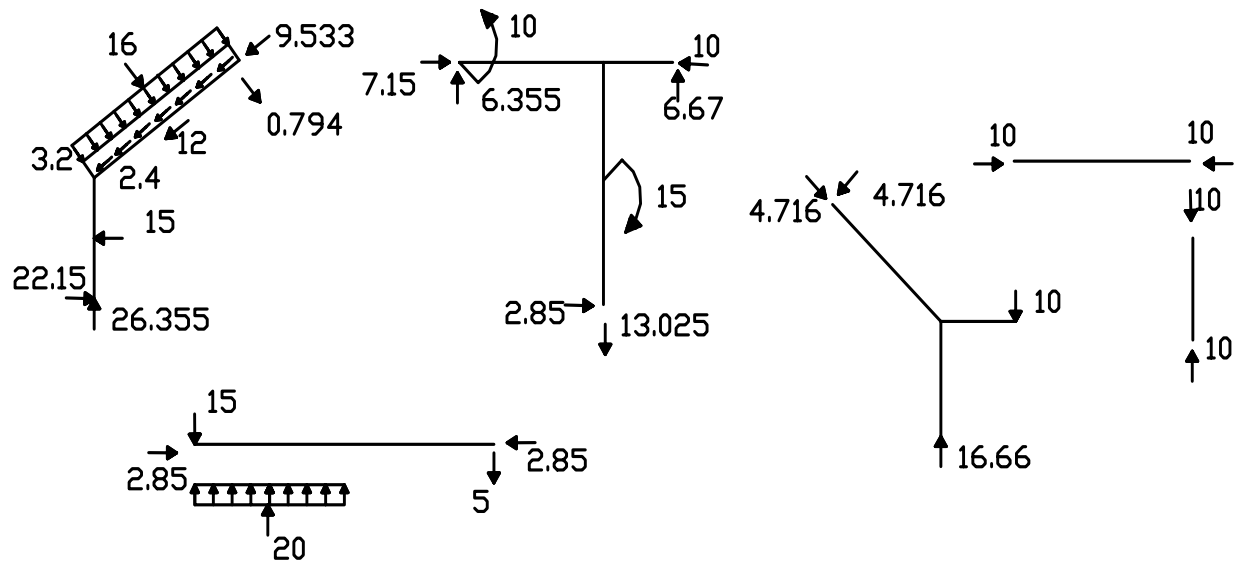
$$\begin{aligned}\sum X &= 0 : \\ X'_A - 10 + 2.85 - 15 &= 0 \\ \Rightarrow X'_A &= 22.15\end{aligned}$$

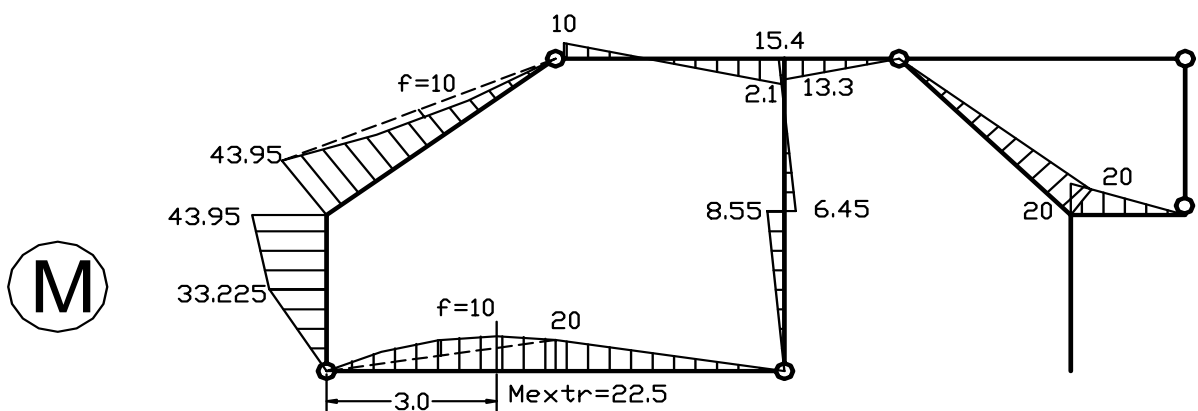
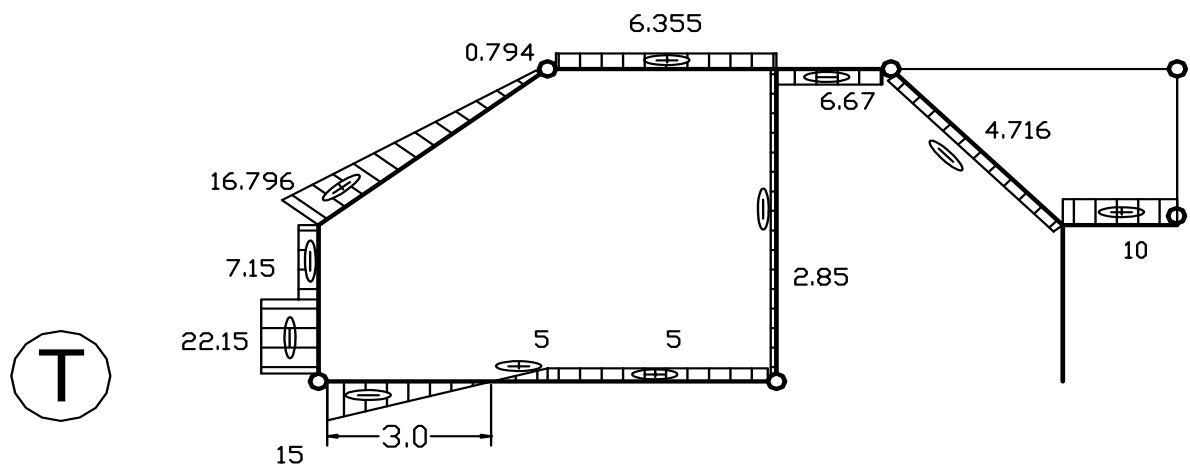
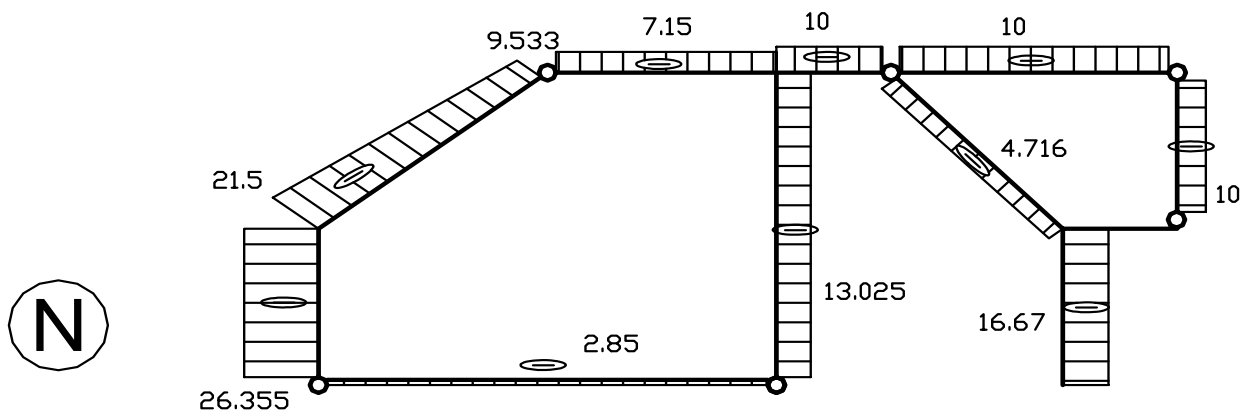
$$\begin{aligned}\sum M_A &= 0 : \\ &-20 \cdot 2 - 13.025 \cdot 8 + Y_B \cdot 8 = 0 \\ \Rightarrow Y_B &= 18.025\end{aligned}\quad (1.1)$$

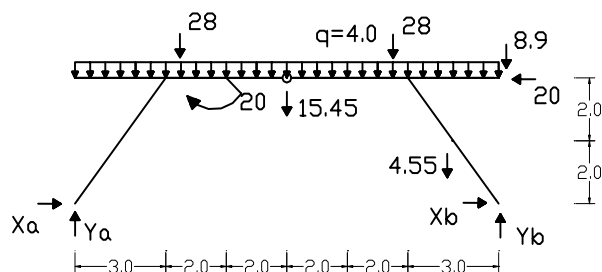
$$\begin{aligned}\sum Y &= 0 : \\ Y_A - 26.355 + 20 + 13.025 - 18.025 &= 0 \\ \Rightarrow Y_A &= 11.355\end{aligned}\quad (1.2)$$

$$\begin{aligned}\sum X &= 0 : \\ -22.15 - 2.85 + X_A &= 0 \\ \Rightarrow X_A &= 25\end{aligned}$$

Stvarni smerovi sila i opterećenja na krajevima:







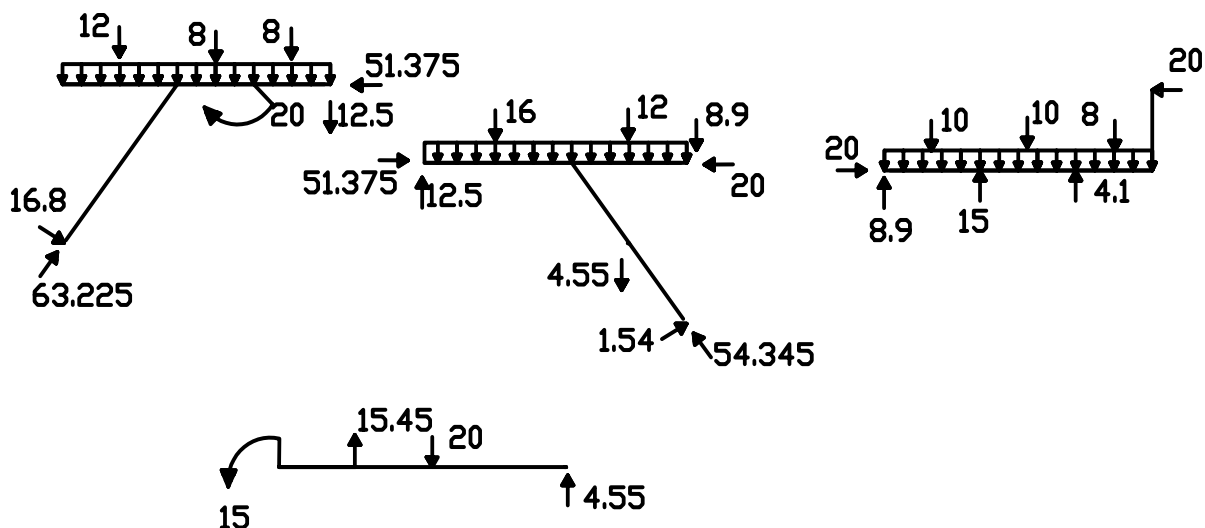
$$\begin{aligned} \sum M_A &= 0 : \\ 56 \cdot 7 + 20 + 15.45 \cdot 7 + 8.9 \cdot 14 - 20 \cdot 4 + 4.55 \cdot 12.5 - Y_B \cdot 14 &= 0 \\ \Rightarrow Y_B &= 44.4 \end{aligned} \quad (1.3)$$

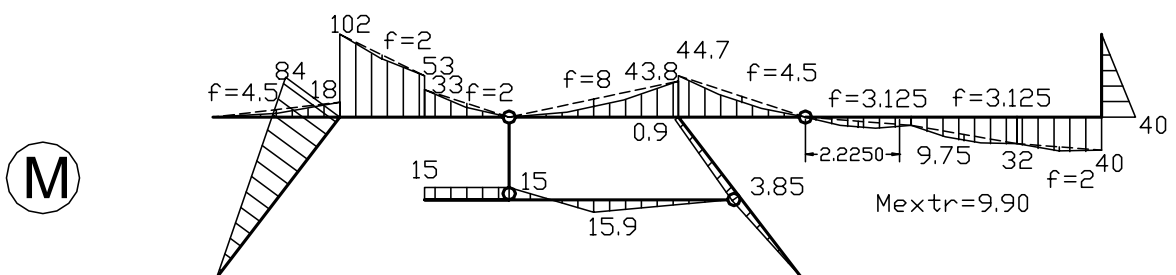
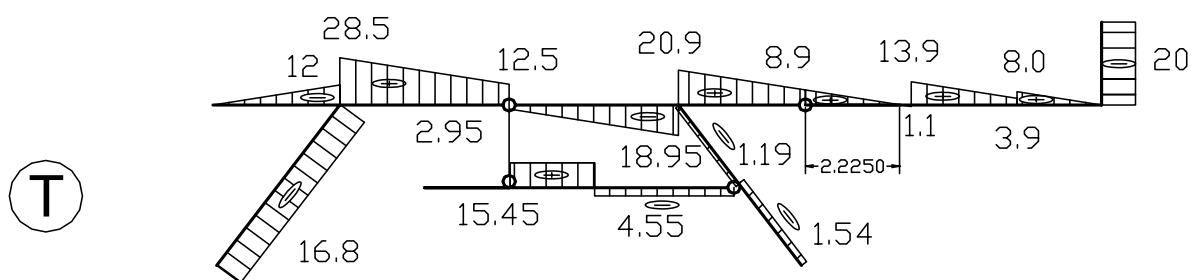
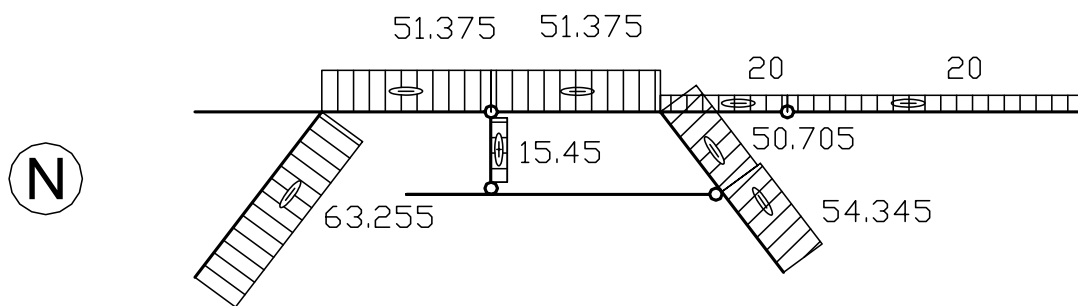
$$\begin{aligned} \sum M_D^{levo} &= 0 : \\ 40.5 \cdot 7 + 20 - 28 \cdot 3.5 - X_A \cdot 4 &= 0 \\ \Rightarrow X_A &= 51.375 \end{aligned}$$

$$\begin{aligned} \sum Y &= 0 : \\ Y_A + 44.4 - 56 - 15.45 - 4.55 - 8.9 &= 0 \\ \Rightarrow Y_A &= 40.5 \end{aligned}$$

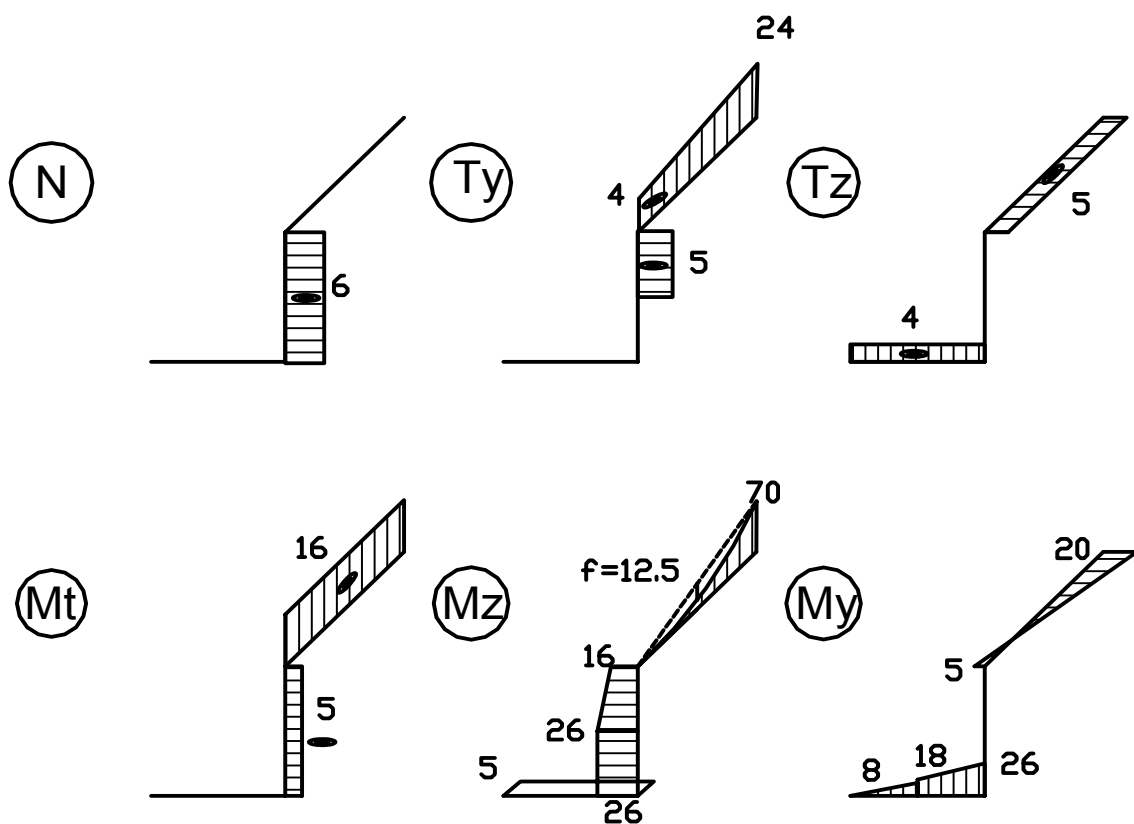
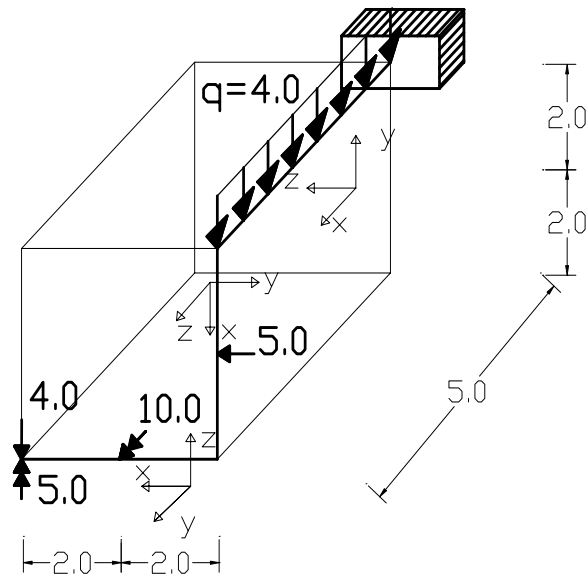
$$\begin{aligned} \sum X &= 0 : \\ X_B + 51.375 - 20 &= 0 \\ \Rightarrow X_B &= -31.375 \end{aligned}$$

Stvarni smerovi sila i opterećenja na krajevima:





1.4 Treći zadatak



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