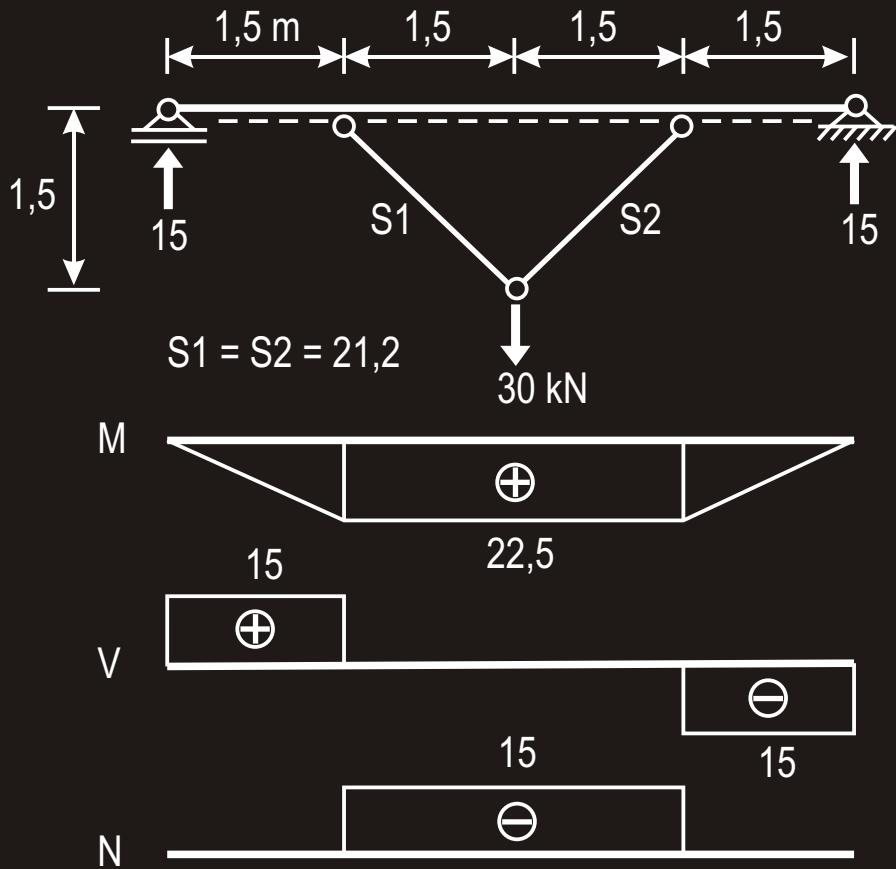
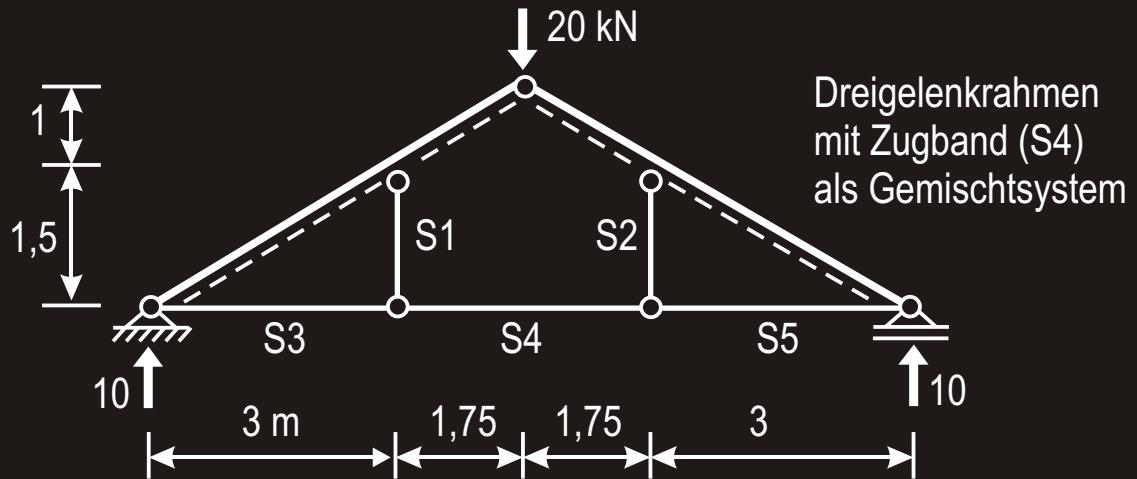


Diethard Thieme
Skripte zur Baumechanik

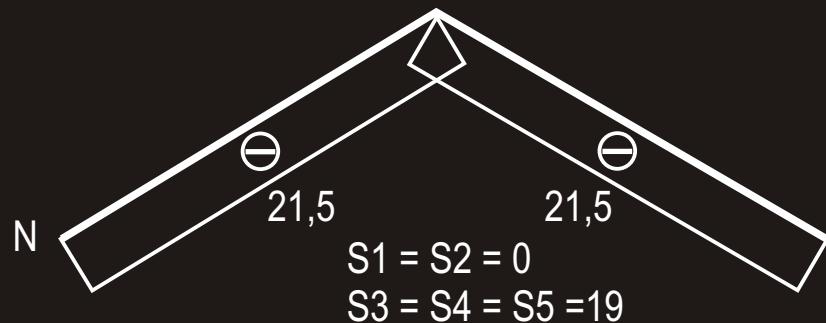
Übungen
mit
Lösungen

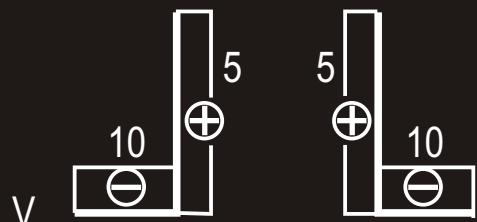
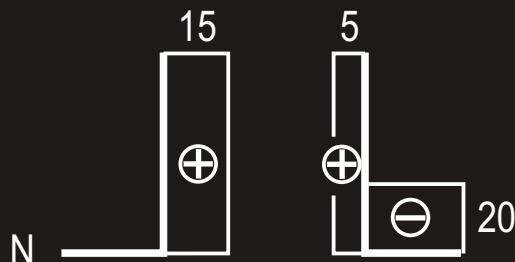
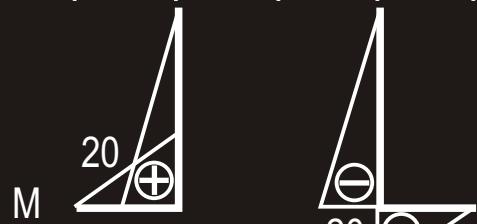
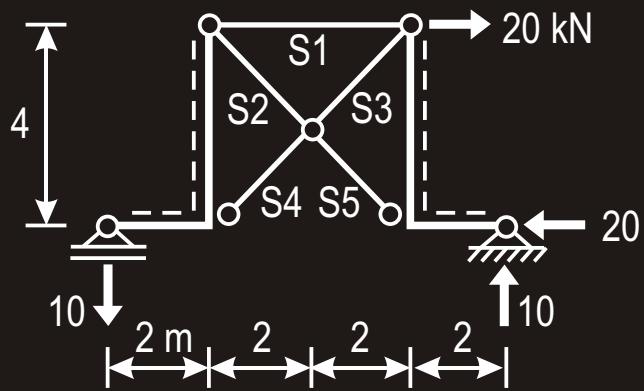
BM 44



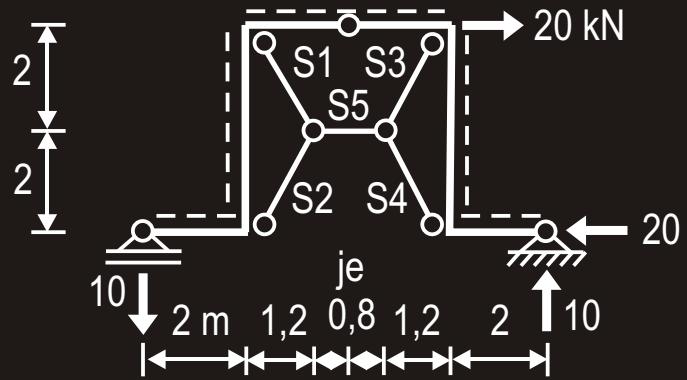


Dreigelenkrahmen
mit Zugband (S4)
als Gemischtsystem

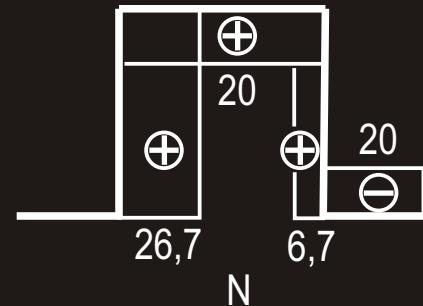
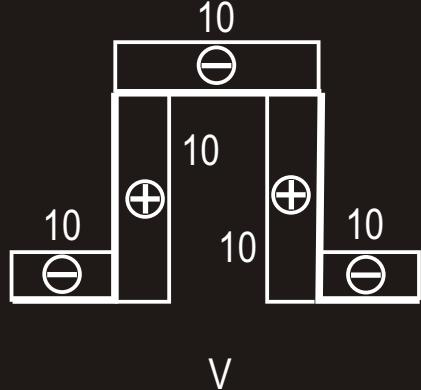
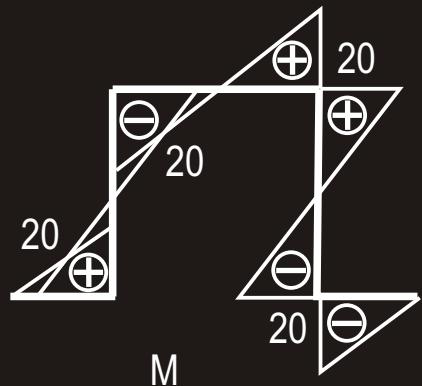


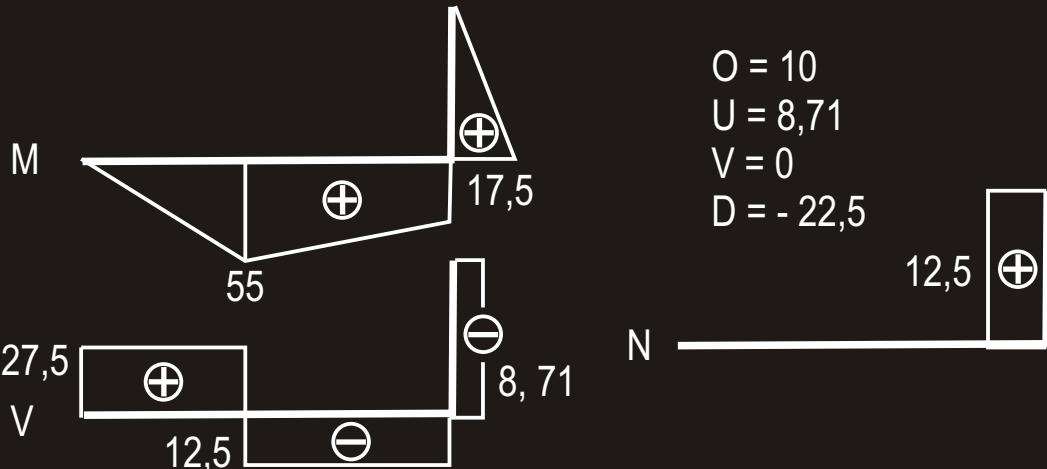
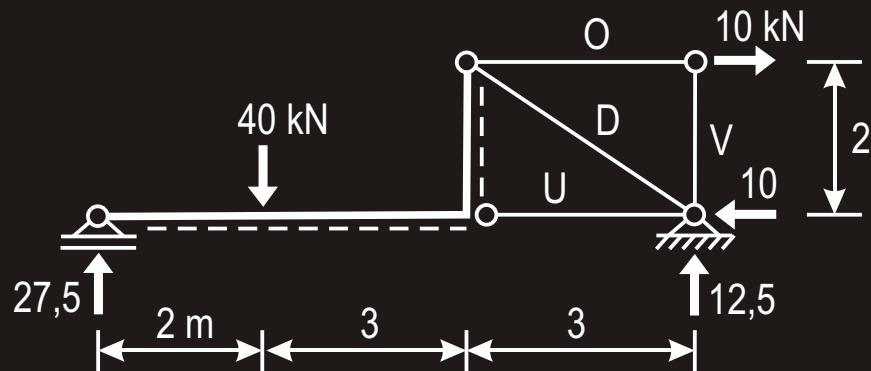


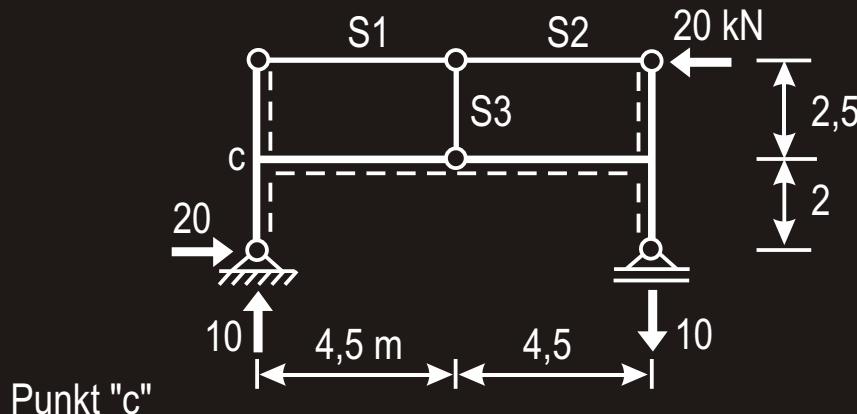
$$\begin{aligned}
 S1 &= 20 \\
 S2 &= -21,2 \\
 S3 &= -7,07 \\
 S4 &= -7,07 \\
 S5 &= -21,2
 \end{aligned}$$



$$\begin{aligned}S_1 &= -19,4 \\S_2 &= -19,4 \\S_3 &= -19,4 \\S_4 &= -19,4 \\S_5 &= 20\end{aligned}$$

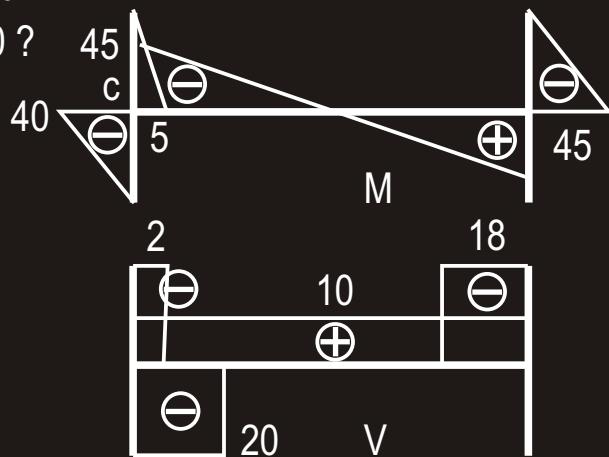




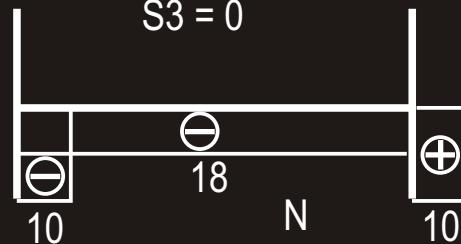


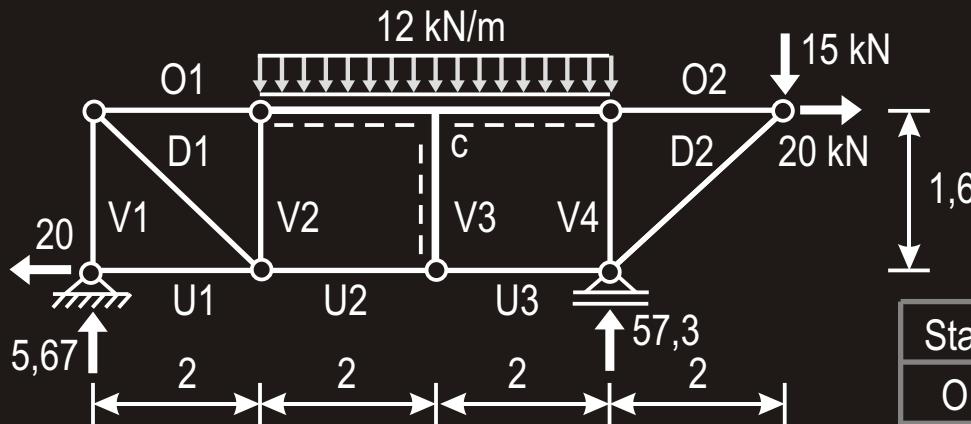
Punkt "c"

$$M = 0 ?$$

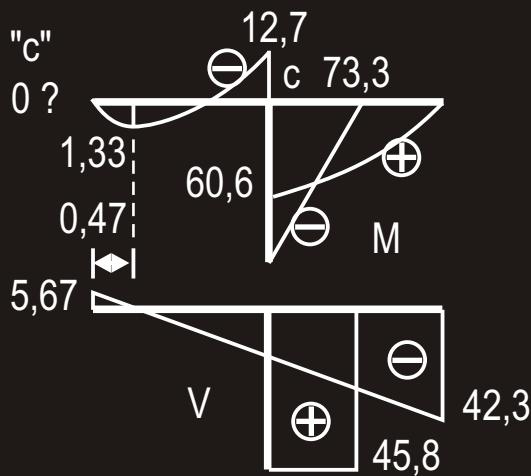


$$\begin{aligned} S1 &= -2 \\ S2 &= -2 \\ S3 &= 0 \end{aligned}$$

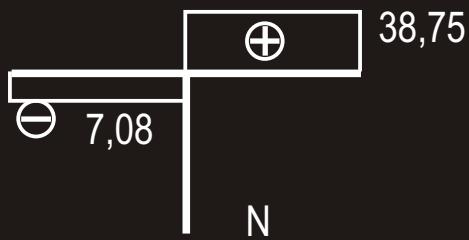


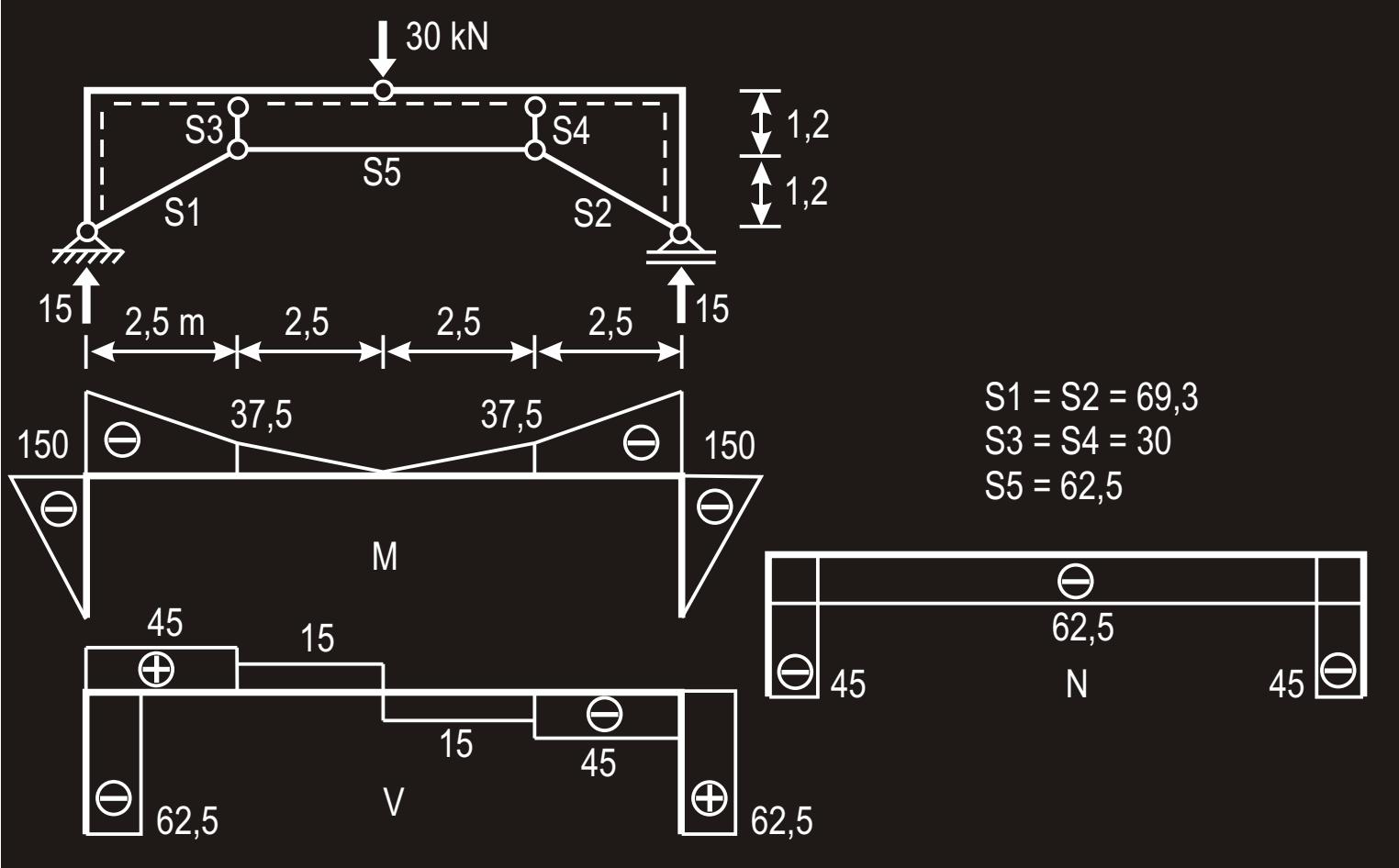


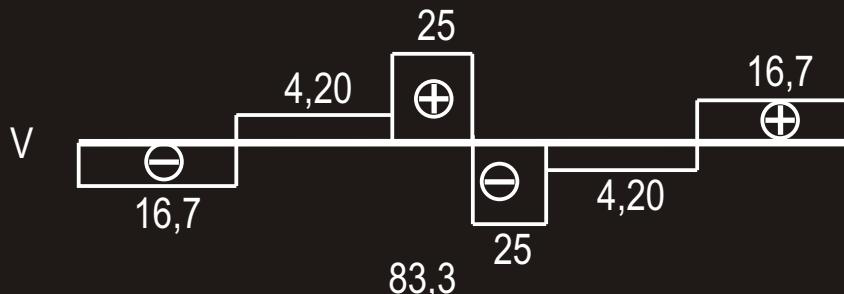
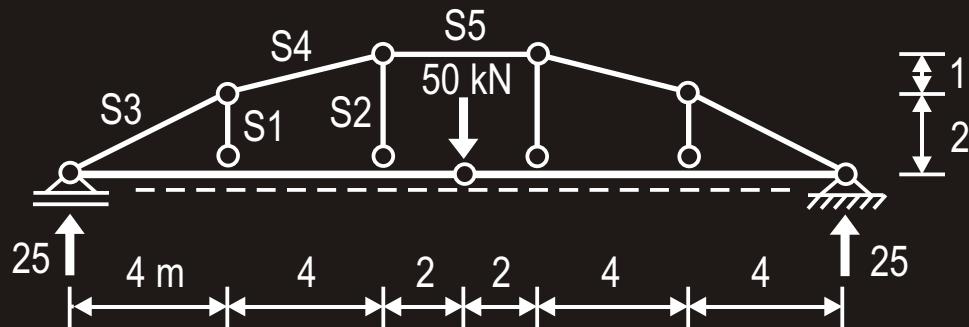
Punkt "c"
 $M = 0 ?$



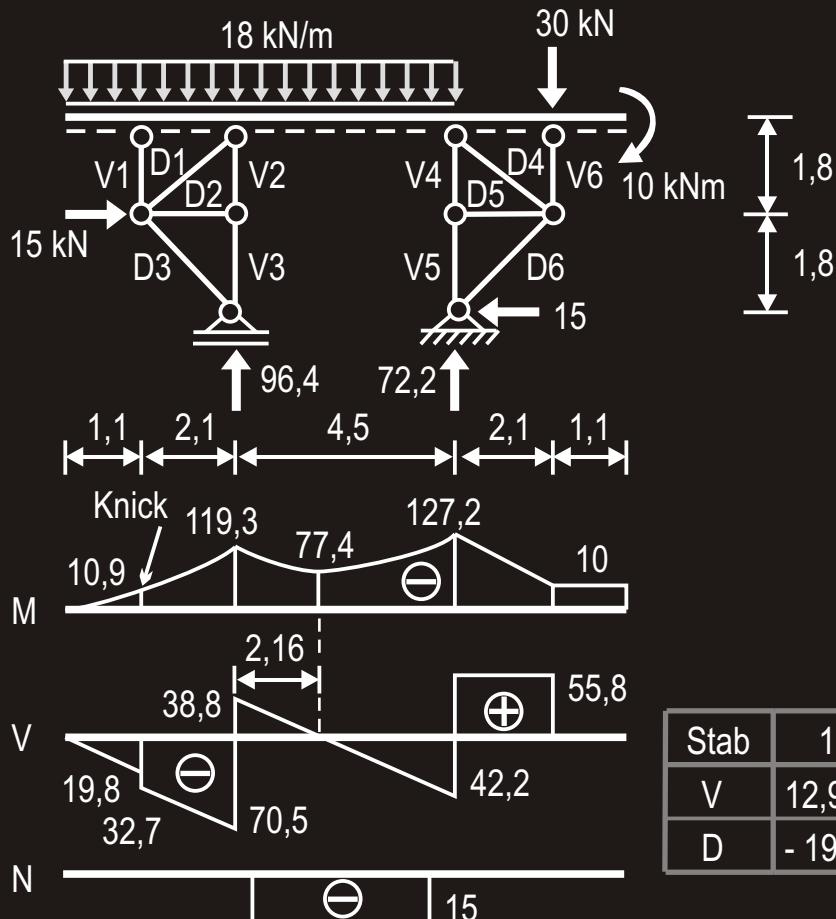
Stab	1	2	3
O	- 7,08	38,75	
U	20	27,08	- 18,75
V	- 5,67	- 5,67	- 42,3
D	9,07	- 24	



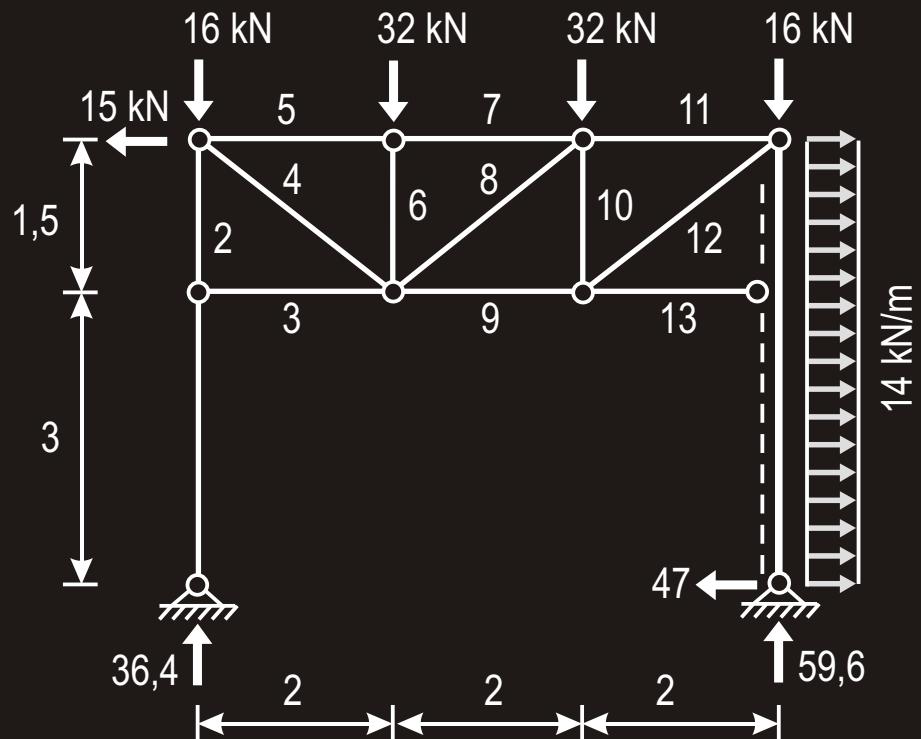




$$\begin{aligned}
 S_1 &= S_2 = 20,8 \\
 S_3 &= -93,2 \\
 S_4 &= -85,9 \\
 S_5 &= -83,3
 \end{aligned}$$



Stab	1	2	3	4	5	6
V	12,9	- 96,4	- 96,4	- 85,1	- 85,1	25,8
D	- 19,8	0	0	- 19,8	0	19,8



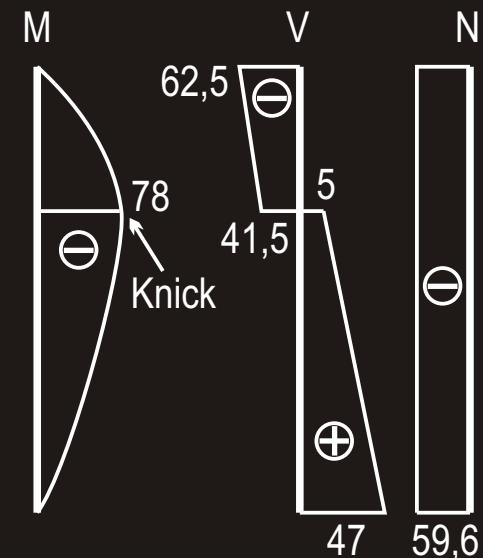
$$\begin{aligned} S_1 &= -36,4 \\ S_2 &= -36,4 \\ S_3 &= 0 \end{aligned}$$

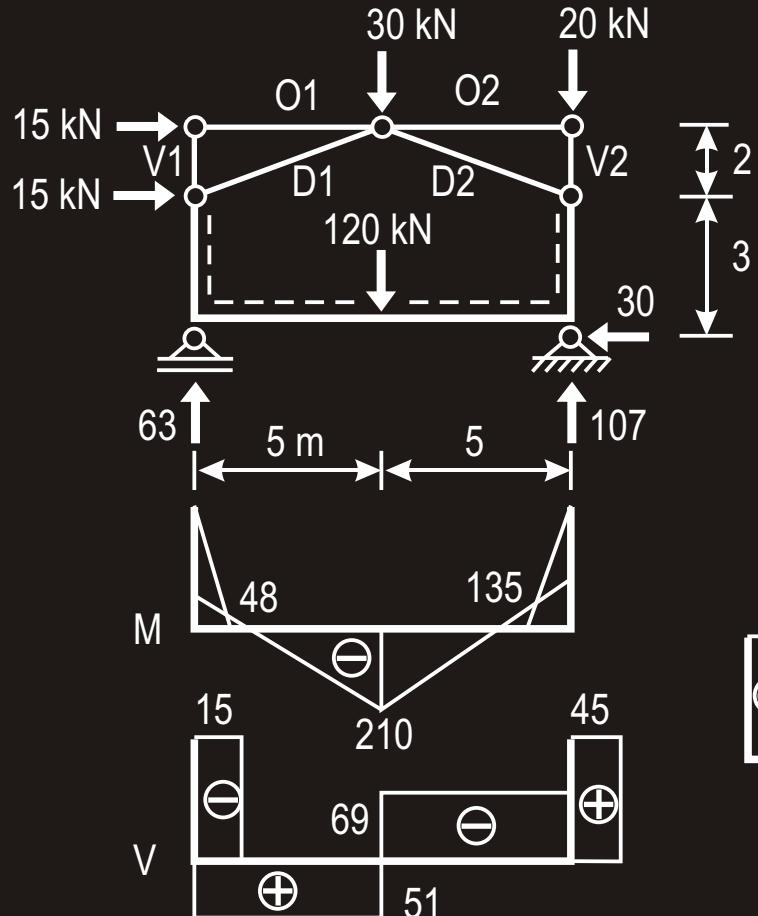
$$\begin{aligned} S_4 &= 33,9 \\ S_5 &= -11,2 \\ S_6 &= -32 \end{aligned}$$

$$\begin{aligned} S_7 &= -11,2 \\ S_8 &= 19,4 \\ S_9 &= 11,7 \end{aligned}$$

$$\begin{aligned} S_{10} &= -43,6 \\ S_{11} &= 4,33 \\ S_{12} &= 72,7 \end{aligned}$$

$$S_{13} = -46,5$$





Auf dem geknickten
Träger sitzt ein
Dreigelenkrahmen aus
zwei Fachwerkscheiben

$$O_1 = -15$$

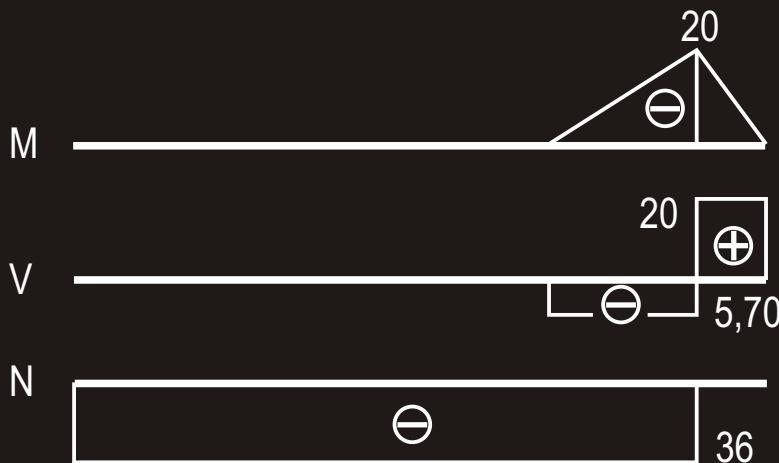
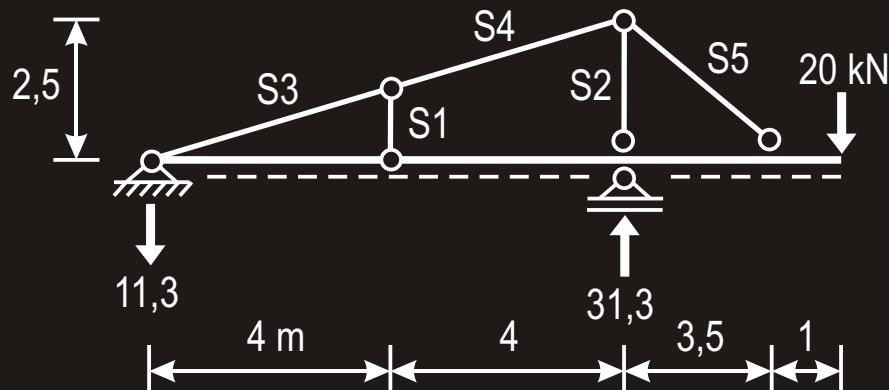
$$O_2 = 0$$

$$V_1 = 0$$

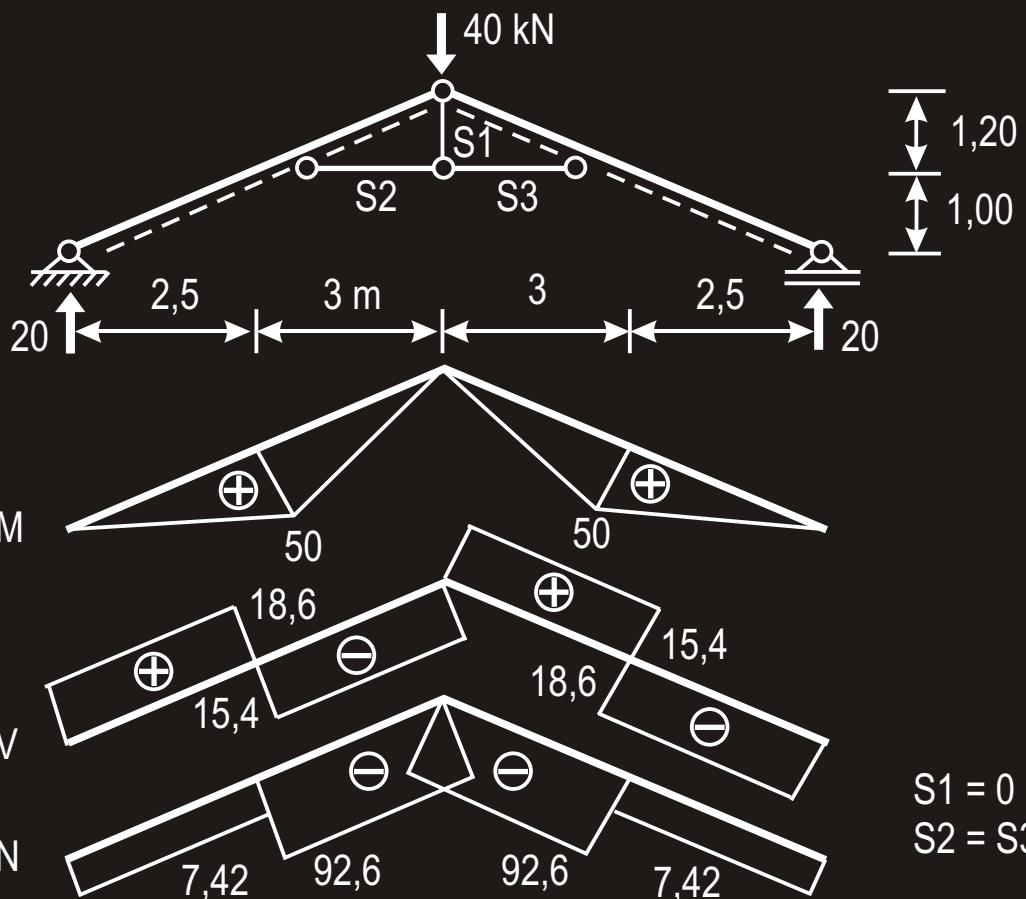
$$V_2 = -20$$

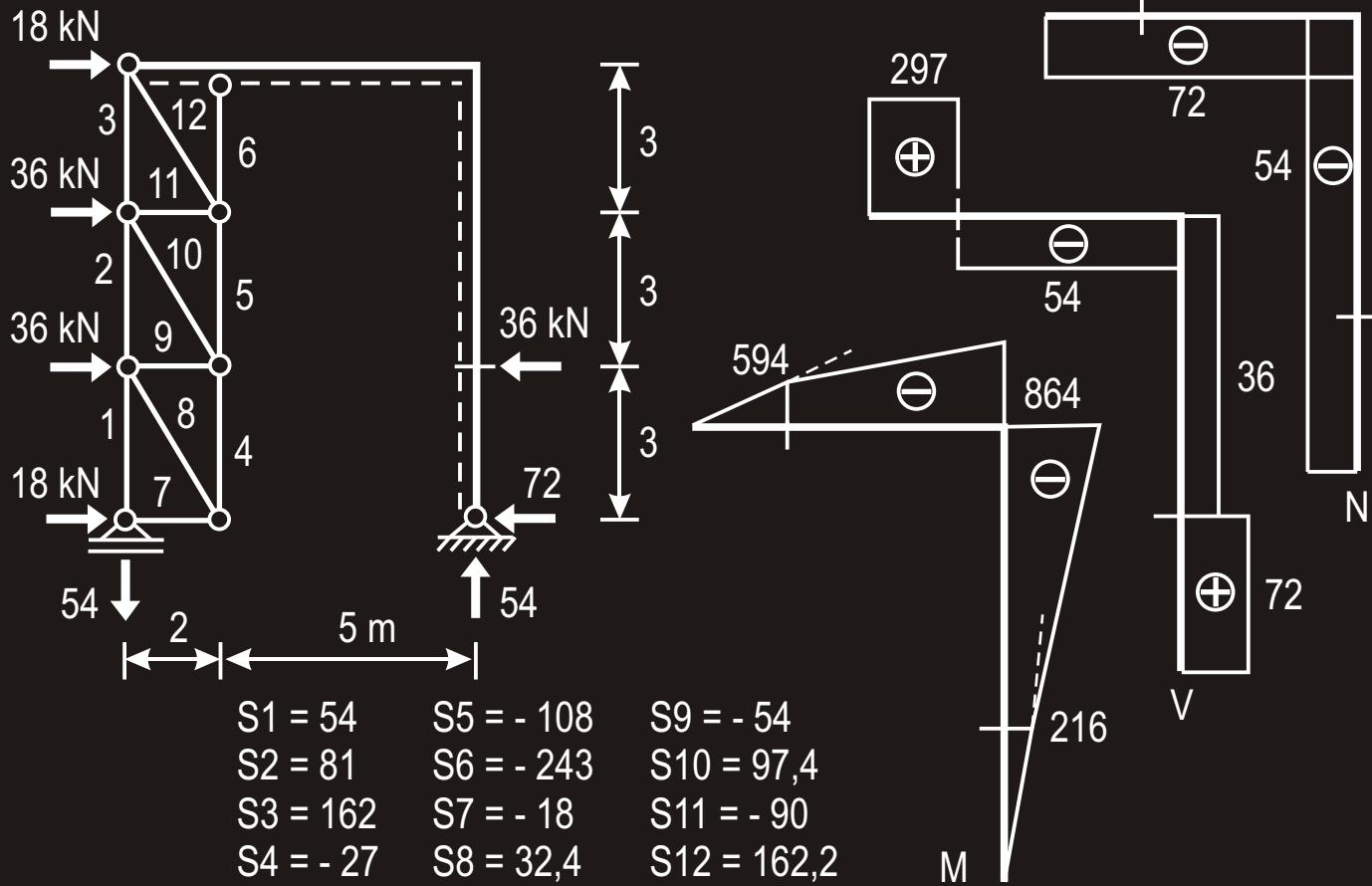
$$D_1 = -32,3$$

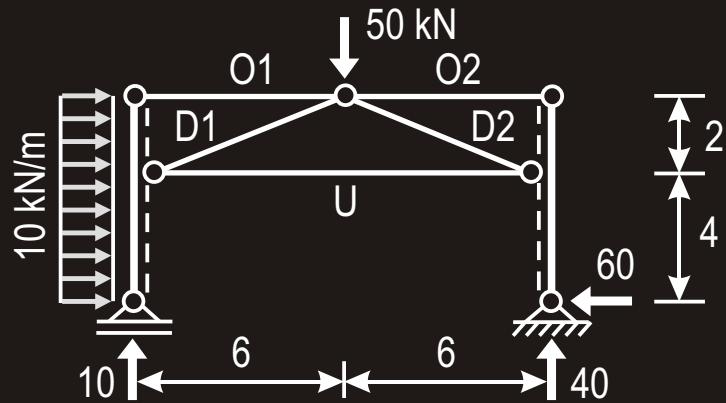
$$D_2 = -48,5$$



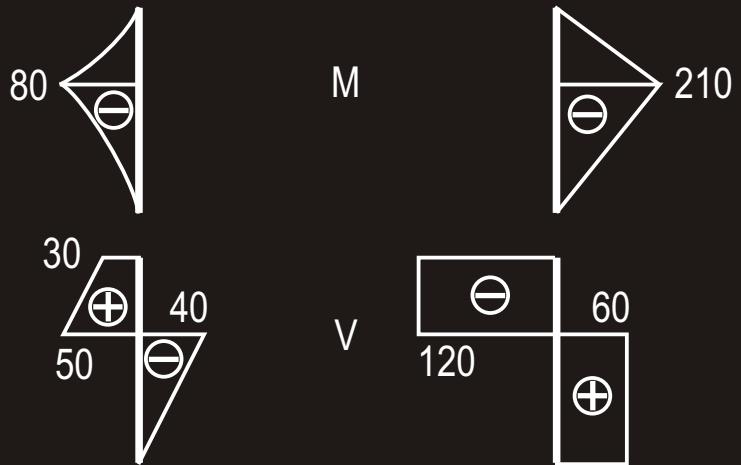
$$\begin{aligned}
 S1 &= 0 \\
 S2 &= -37 \\
 S3 = S4 &= 37,8 \\
 S5 &= 44,2
 \end{aligned}$$

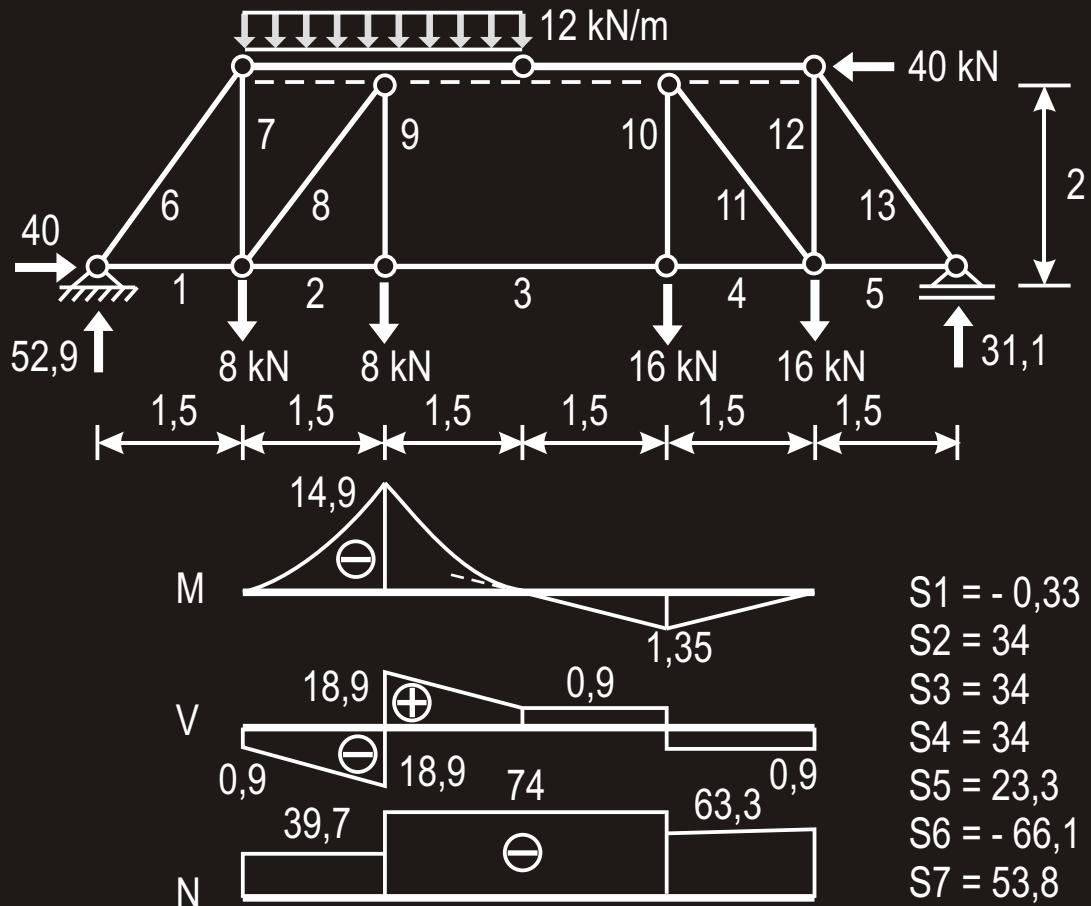




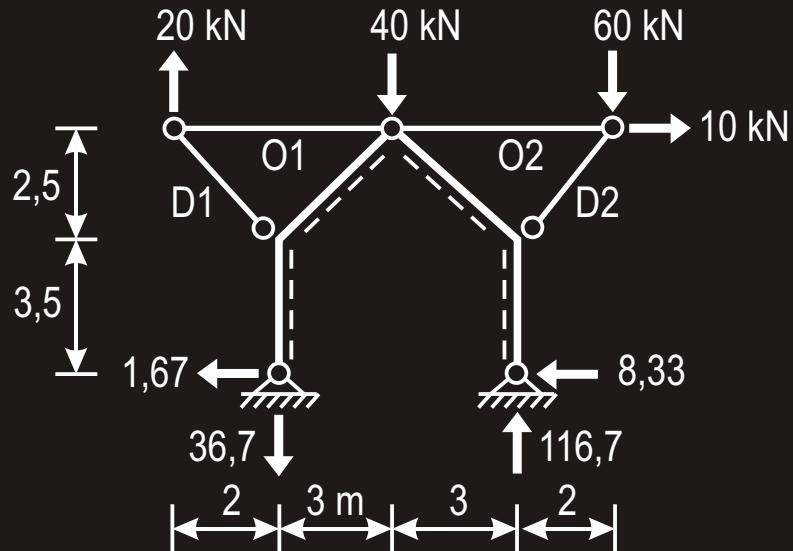


$$\begin{aligned}
 O1 &= 30 \\
 O2 &= 120 \\
 D1 &= -31,6 \\
 D2 &= -126,5 \\
 U &= -60
 \end{aligned}$$

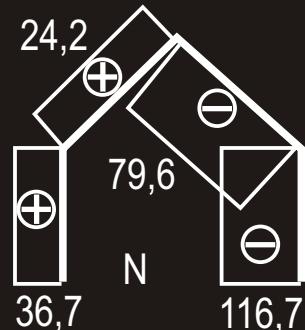
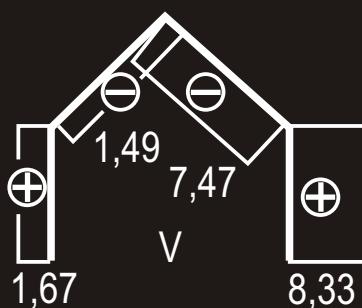
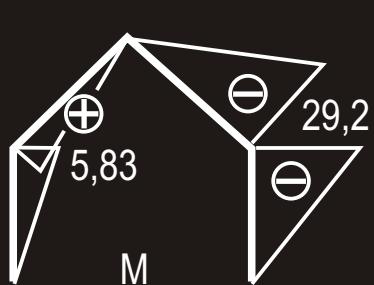


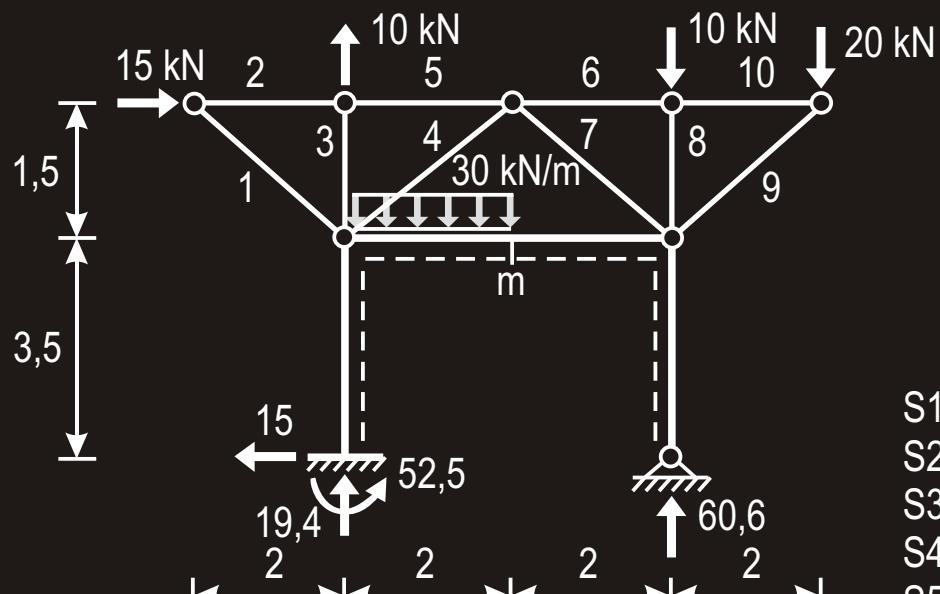


$S_1 = -0,33$	$S_8 = -57,2$
$S_2 = 34$	$S_9 = 8$
$S_3 = 34$	$S_{10} = 16$
$S_4 = 34$	$S_{11} = -17,8$
$S_5 = 23,3$	$S_{12} = 30,2$
$S_6 = -66,1$	$S_{13} = -38,9$
$S_7 = 53,8$	



$$\begin{aligned}
 O_1 &= -16 \\
 O_2 &= 58 \\
 O_3 &= 25,6 \\
 D_2 &= -76,8
 \end{aligned}$$





$$\begin{array}{ll}
 S_1 = 0 & S_6 = 26,6 \\
 S_2 = -15 & S_7 = -26 \\
 S_3 = 10 & S_8 = -10 \\
 S_4 = 26 & S_9 = -33,3 \\
 S_5 = -15 & S_{10} = 26,6
 \end{array}$$

