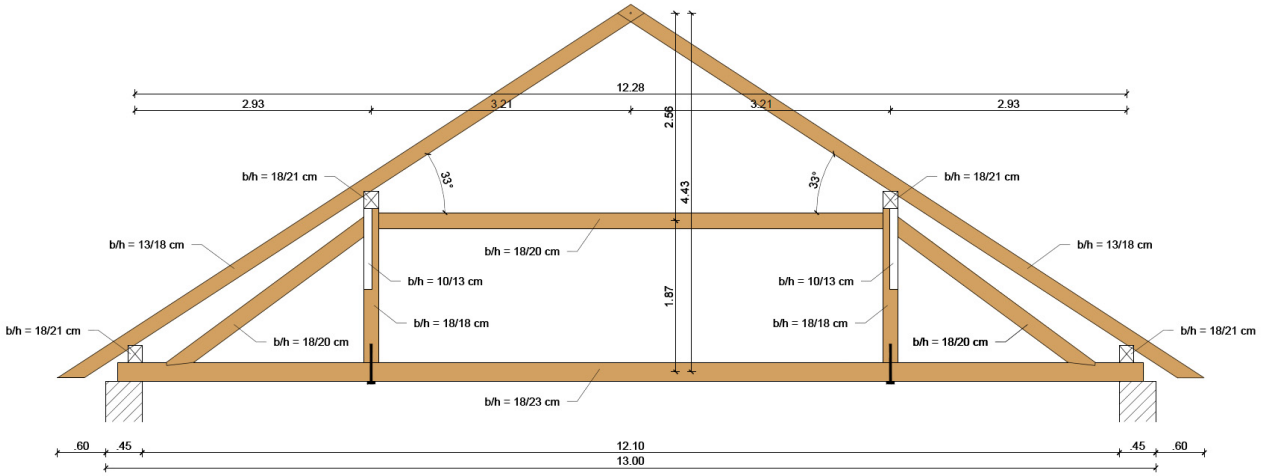
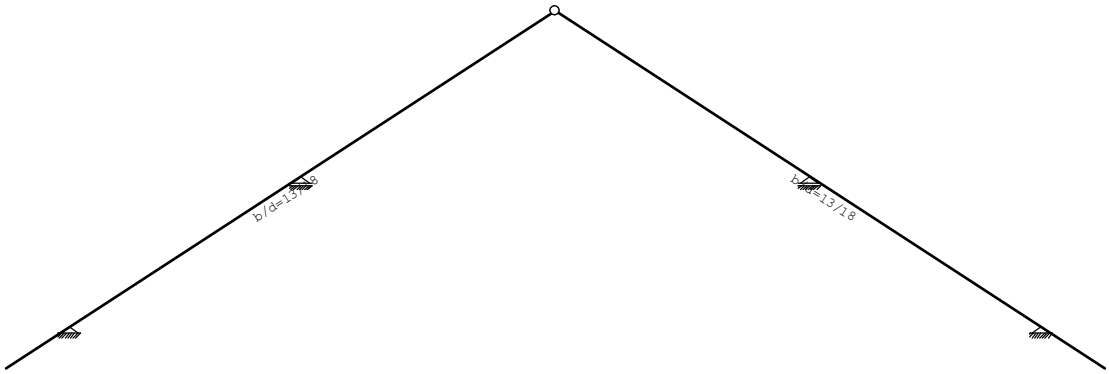
5. RAČUNSKE KONTROLE ELEMENTOV NA STATIČNO OBTEŽBO

5.1 ŠPIROVCI b/h = 13/18 cm





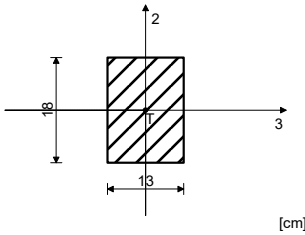
Tabele materialov

No	Naziv materiala	E[kN/m2]	μ	γ[kN/m3]	αt[1/C]	Em[kN/m2]	μm
1	Les-Iglavci-Masiven les	1.000e+7	0.20	5.00	1.000e-5	1.000e+7	0.20

Seti gred

Set: 1 Prerez: b/d=13/18, Fiktivna ekscentričnost

	Mat.	A1	A2	A3	I1	I2	I3
	1 - Les-Iglavci-M...	2.340e-2	1.950e-2	1.950e-2	7.320e-5	3.296e-5	6.318e-5



[cm]

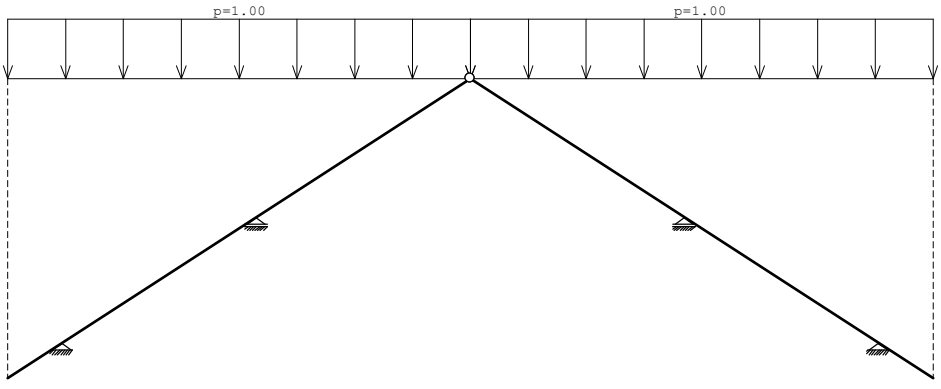
Seti točkovnih podpor

	K,R1	K,R2	K,R3	K,M1	K,M2	K,M3
1	1.000e+10	1.000e+10	1.000e+10			
2			1.000e+10			

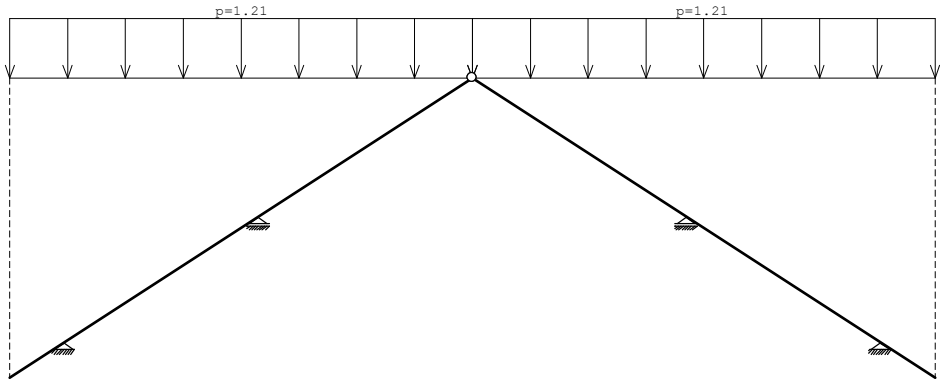
Lista obtežnih primerov

LC	Naziv	pX [kN]	pY [kN]	pZ [kN]
1	Lastna teža špirovcev (g)	-0.00	0.00	-1.94
2	Stalna obtežba strehe	0.00	0.00	-13.88
3	Sneg	0.00	0.00	-16.79
4	Veter 0,GH tlak,JI srk	2.77	0.00	-0.51
5	Veter 180,GH tlak,JI srk	-2.77	0.00	-0.51
6	Veter 0,GH tlak,JI tlak	0.97	0.00	-3.27
7	Veter 180,GH tlak,JI tlak	-0.97	0.00	-3.27
8	Veter 90,FG srk	-0.04	0.00	8.49
9	Komb.: 1.35xI+1.35xII+1.5xIII	0.00	0.00	-46.54
10	Komb.: 1.35xI+1.35xII+1.5xIII+0.9xIV	2.49	0.00	-47.00
11	Komb.: 1.35xI+1.35xII+1.5xIII+0.9xV	-2.49	0.00	-47.00
12	Komb.: 1.35xI+1.35xII+1.5xIII+0.9xVI	0.88	0.00	-49.49
13	Komb.: 1.35xI+1.35xII+1.5xIII+0.9xVII	-0.88	0.00	-49.49
14	Komb.: 1.35xI+1.35xII+1.5xIII+0.9xVIII	-0.04	0.00	-38.90
15	Komb.: 1.35xI+1.35xII+0.75xIII	0.00	0.00	-33.95
16	Komb.: 1.35xI+1.35xII+0.75xIII+1.5xIV	4.15	0.00	-34.71
17	Komb.: 1.35xI+1.35xII+0.75xIII+1.5xV	-4.15	0.00	-34.71
18	Komb.: 1.35xI+1.35xII+0.75xIII+1.5xVI	1.46	0.00	-38.86
19	Komb.: 1.35xI+1.35xII+0.75xIII+ +1.5xVII	-1.46	0.00	-38.86
20	Komb.: 1.35xI+1.35xII+ +0.75xIII+1.5xVIII	-0.06	0.00	-21.21
21	Komb.: I+II	0.00	0.00	-15.82
22	Komb.: I+II+1.5xIV	4.15	0.00	-16.58
23	Komb.: I+II+1.5xV	-4.15	0.00	-16.58
24	Komb.: I+II+1.5xVI	1.46	0.00	-20.73
25	Komb.: I+II+1.5xVII	-1.46	0.00	-20.73
26	Komb.: I+II+1.5xVIII	-0.06	0.00	-3.08
27	Komb.: I+II+III	0.00	0.00	-32.61
28	Komb.: I+II+III+0.6xIV	1.66	0.00	-32.92
29	Komb.: I+II+III+0.6xV	-1.66	0.00	-32.92
30	Komb.: I+II+III+0.6xVI	0.58	0.00	-34.58
31	Komb.: I+II+III+0.6xVII	-0.58	0.00	-34.58
32	Komb.: I+II+III+0.6xVIII	-0.03	0.00	-27.51
33	Komb.: I+II+0.5xIII	0.00	0.00	-24.21
34	Komb.: I+II+0.5xIII+IV	2.77	0.00	-24.72
35	Komb.: I+II+0.5xIII+V	-2.77	0.00	-24.72
36	Komb.: I+II+0.5xIII+VI	0.97	0.00	-27.49
37	Komb.: I+II+0.5xIII+VII	-0.97	0.00	-27.49
38	Komb.: I+II+0.5xIII+VIII	-0.04	0.00	-15.72
39	Komb.: I+II	0.00	0.00	-15.82
40	Komb.: I+II+IV	2.77	0.00	-16.32
41	Komb.: I+II+V	-2.77	0.00	-16.32
42	Komb.: I+II+VI	0.97	0.00	-19.09
43	Komb.: I+II+VII	-0.97	0.00	-19.09
44	Komb.: I+II+VIII	-0.04	0.00	-7.32
45	Komb.: I+II	0.00	0.00	-15.82

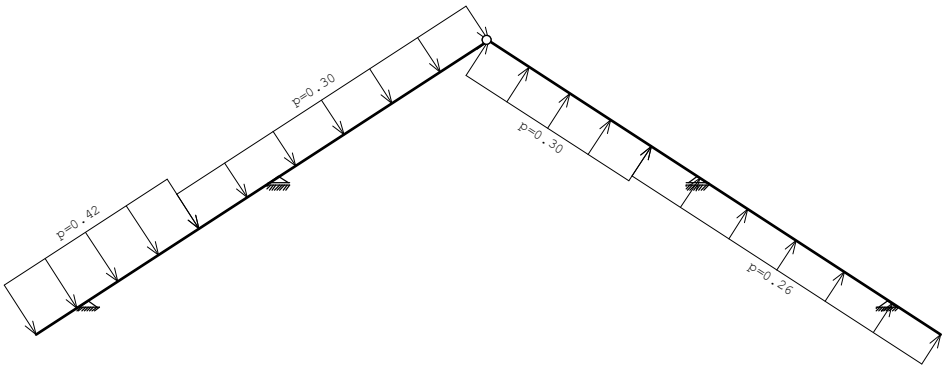
Obt. 2: Stalna obtežba strehe



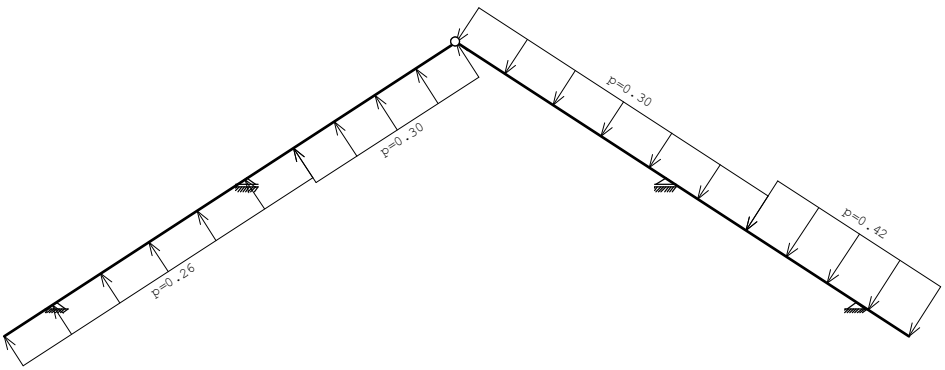
Obt. 3: Sneg



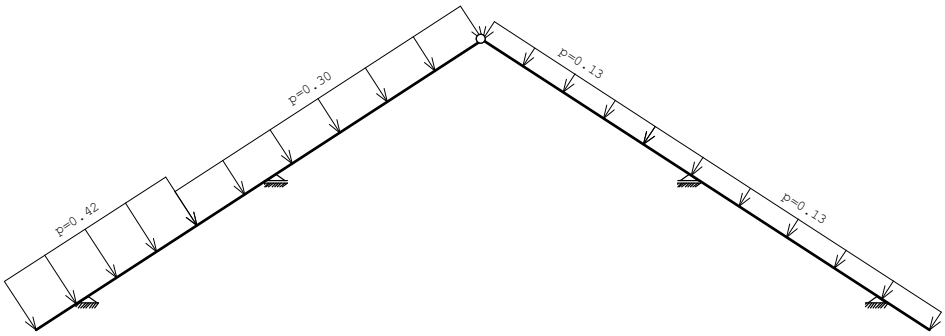
Obt. 4: Veter 0,GH tlak,JI srk



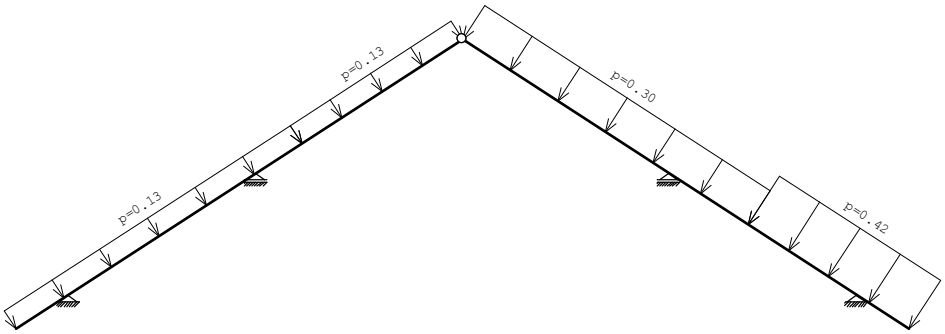
Obt. 5: Veter 180,GH tlak,JI srk



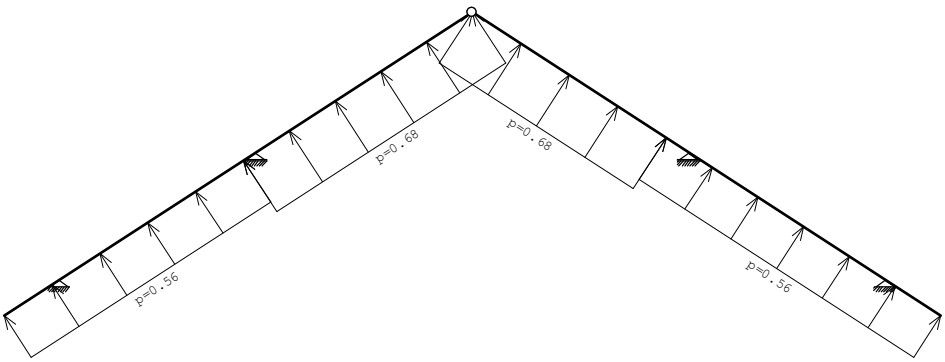
Obt. 6: Veter 0,GH tlak,JI tlak



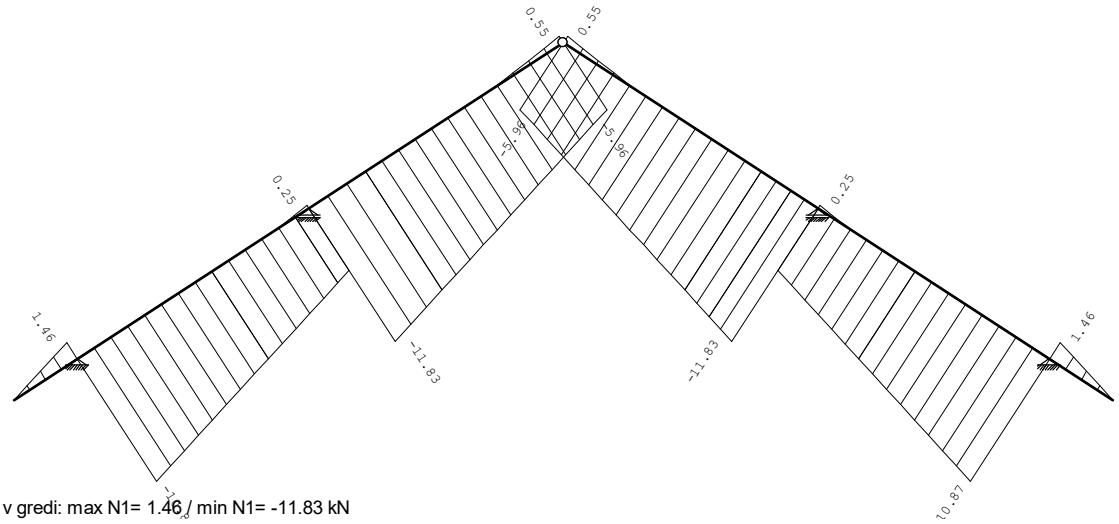
Obt. 7: Veter 180,GH tlak,JI tlak



Obt. 8: Veter 90,FG srk

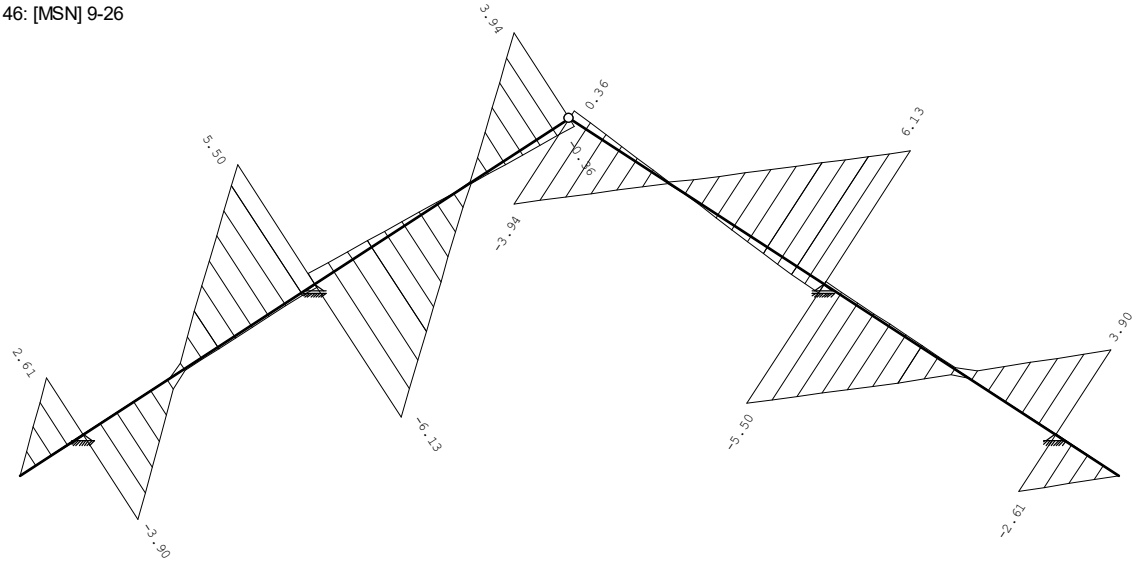


Obt. 46: [MSN] 9-26



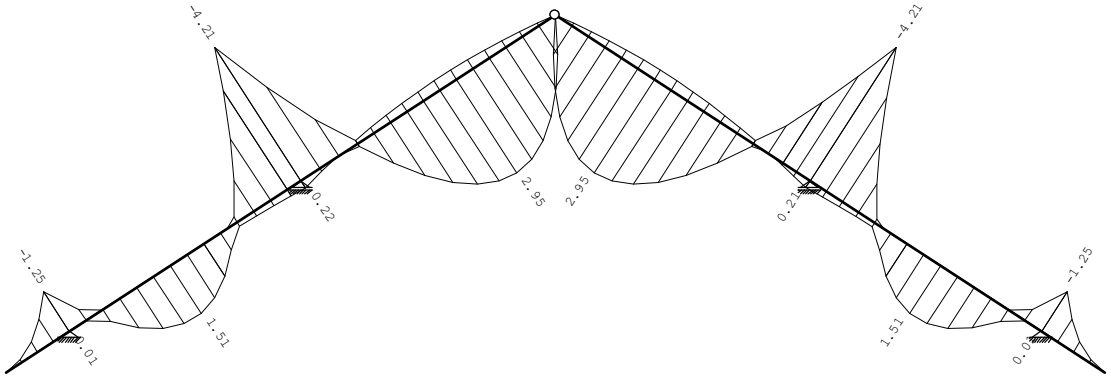
Vplivi v gredi: max N1= 1.46 / min N1= -11.83 kN

Obt. 46: [MSN] 9-26



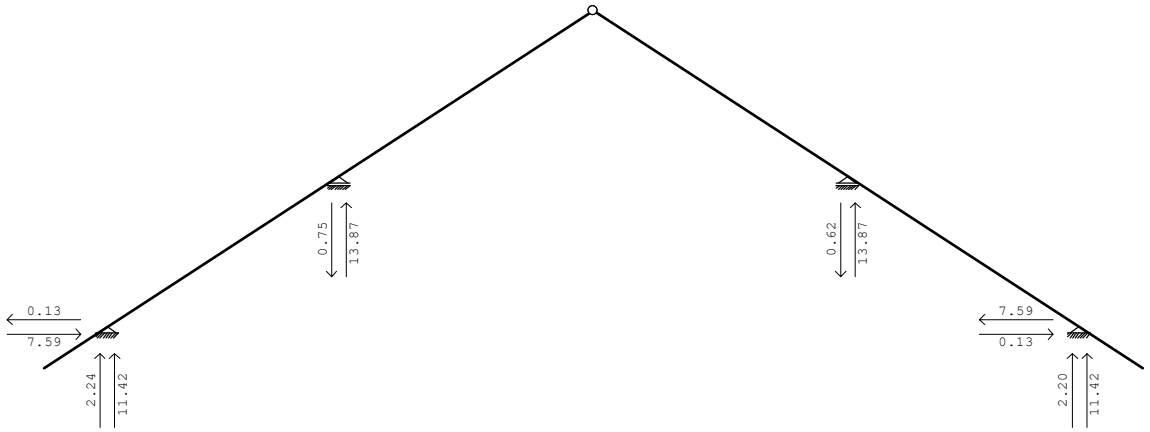
Vplivi v gredi: max T2= 6.13 / min T2= -6.13 kN

Obt. 46: [MSN] 9-26



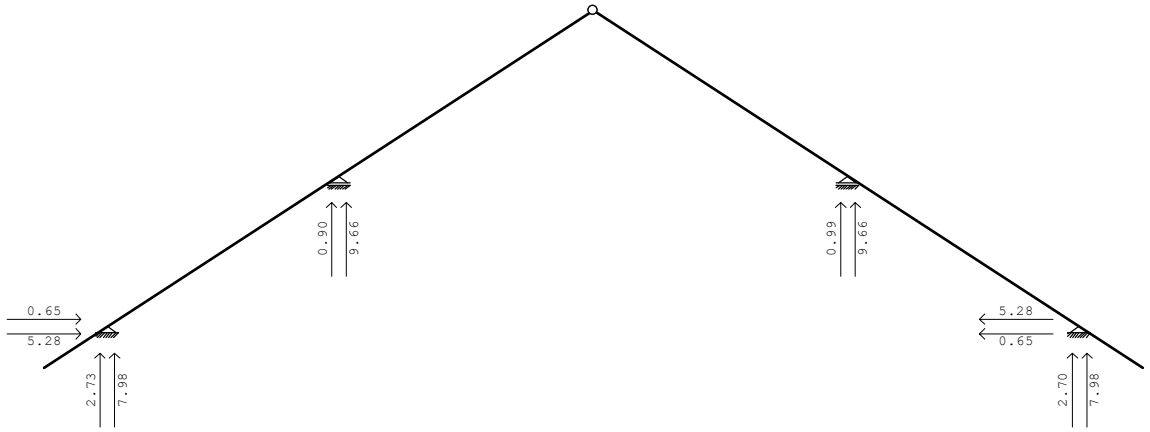
Vplivi v gredi: max M3= 2.95 / min M3= -4.21 kNm

Obt. 45: [MSN] 9-26



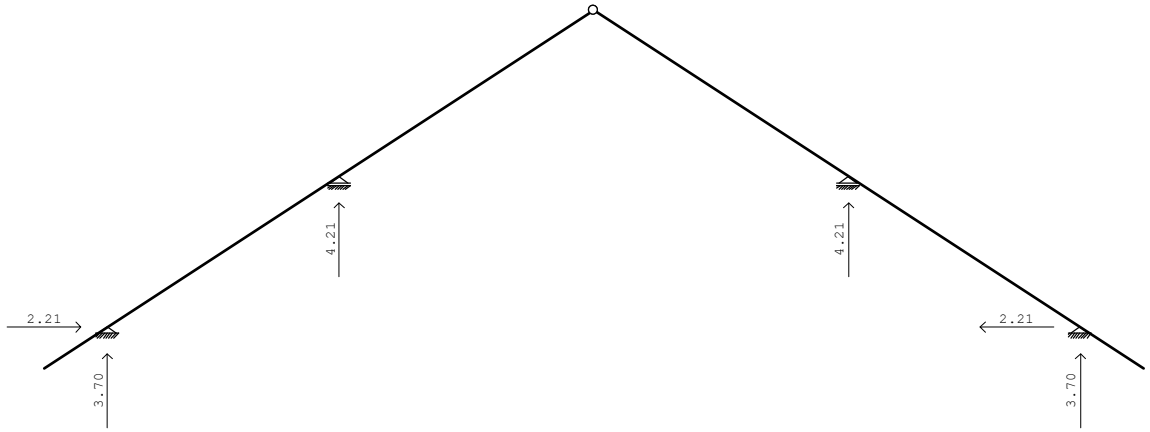
Reakcije podpor (Min/Max)

Obt. 46: [MSU k.k.v.] 27-44



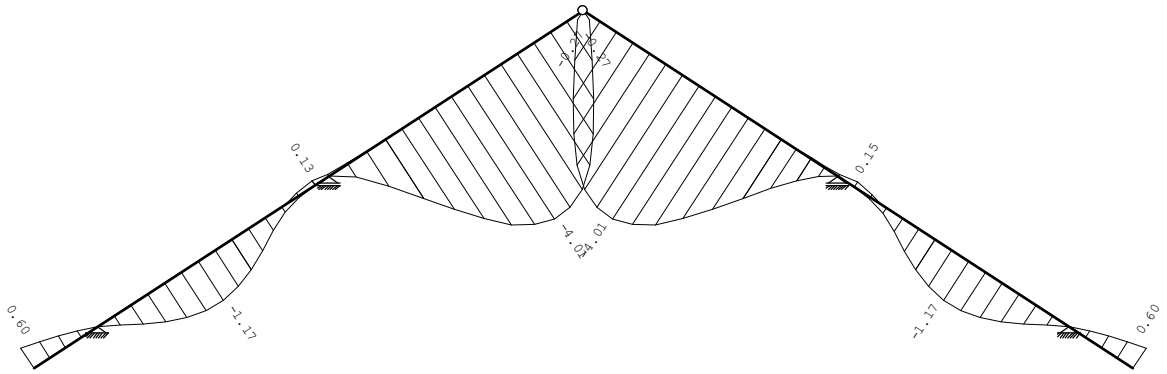
Reakcije podpor (Min/Max)

Obt. 45: I+II



Reakcije podpor

Obt. 46: [MSU k.k.v.] 27-44

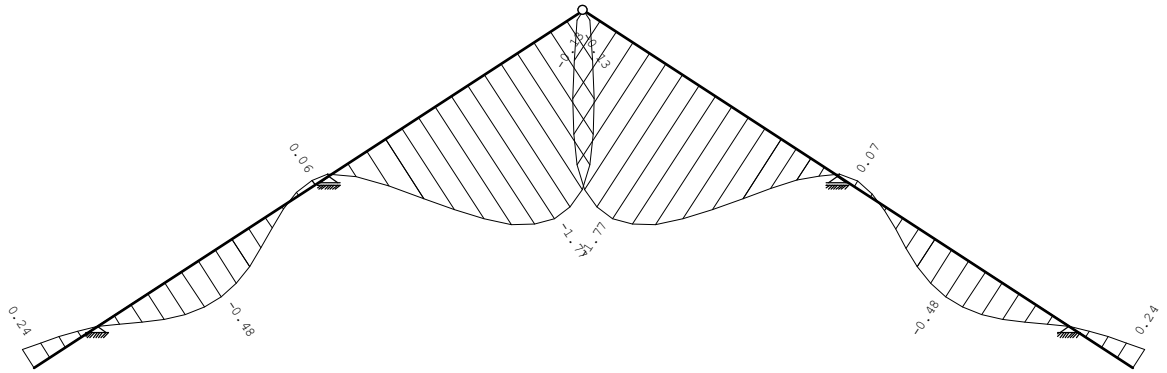


Vplivi v gredi: max u2= 0.60 / min u2= -4.01 m / 1000

Karakteristična kombinacija vplivov:

Izračunan elastični poves nosilca: $w_{el.}$ = 4,01 mm
Dopusten poves: $w_{max.}$ = L / 300 = 3830 mm / 300 = 12,77 mm ≥ $w_{el.}$ ✓

Obt. 45: I+II



Vplivi v gredi: max u2= 0.24 / min u2= -1.77 m / 1000

Navidezno stalna kombinacija vplivov:

Izračunan elastični poves nosilca: $w_{el.}$ = 1,77 mm
Izračunan reološki poves nosilca: $w_{reol.} = w_{el.} \cdot (1 + [\psi_2] \cdot k_{def}) = 1{,}77 \text{ mm} \cdot (1 + 0{,}8) = 3{,}19 \text{ mm}$

Za stalne obtežbe se uporabi faktor: $(1 + k_{def})$; k_{def} = 0,8
Za spremenljive obtežbe se uporabi faktor: $(1 + \psi_2 \cdot k_{def})$; $\psi_{2,koristna}$ = 0,3, $\psi_{2,sneg}$ = 0, k_{def} = 0,8

Dopusten poves: $w_{max.}$ = L / 300 = 3830 mm / 300 = 12,77 mm ≥ $w_{reol.}$. ✓