Resultate Baustatik I, Hausübung 3

1a)

Stab	1	4	11	13
Kraft	$-\frac{Q}{2}$	$-\frac{Q}{2}$	$\frac{Q}{2}$	$-Q\sqrt{2}$

1b)

Stab	1	2	3	4	5	6	7	8	9
Kraft	$-Q$	$-\frac{3Q}{4}$	$-\frac{Q}{4}$	0	$\frac{3Q}{4}$	$\frac{Q}{2}$	$\frac{Q}{2}$	$\frac{Q}{4}$	0

Stab	10	11	12	13	14	15	16	17
Kraft	$-\frac{Q}{4}$	0	$\frac{Q}{4}$	0	$\frac{Q}{4}\sqrt{2}$	$\frac{Q}{4}\sqrt{2}$	$-\frac{Q}{4}\sqrt{2}$	$-\frac{Q}{4}\sqrt{2}$

2) $S_1 = \frac{Q}{15}(21 - 32\sqrt{3}) = \underline{\underline{-2.295Q}}$ (Druck)

3)

Stab	6	8	10	12	17	18
Kraft	$\frac{Q}{\sqrt{6}}$	$\frac{Q}{\sqrt{6}}$	$\frac{Q}{\sqrt{6}}$	$-\frac{Q}{\sqrt{6}}$	$\frac{Q}{\sqrt{6}}$	$\frac{Q}{\sqrt{6}}$

restliche Stabkräfte = 0

4) $S_1 = \frac{13Q}{4} = \underline{\underline{3.25Q}}$ (Zug)