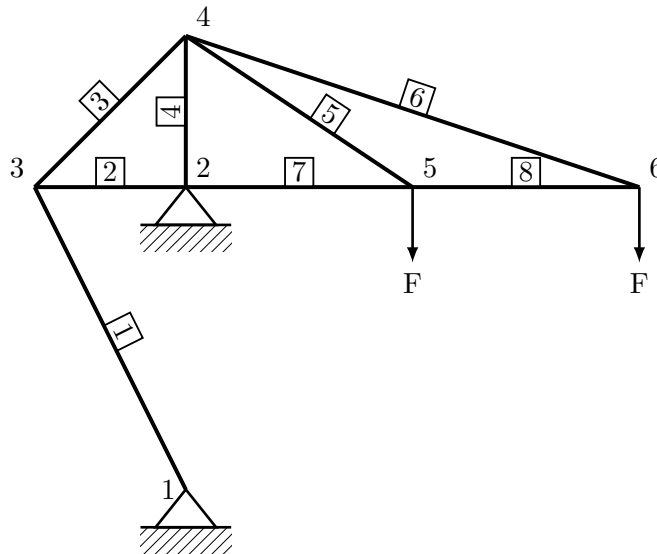


Practical 1, Group A: Stadium

The figure below represents the truss framework on the roof of Enschede's FC Twente stadium (see picture). All trusses are connected with hinges. Use MATLAB and the finite element method to determine the displacements of the nodes of the construction. Instructions can be found in the practical training manual. Assess the correctness of the results by checking equilibrium of the framework and checking whether the elongation of the trusses agree with the truss forces. Fill in the answer sheet and let the student assistants assess your work. They may ask some questions to see whether you understand what you did.



Hand in the answer sheet to the student assistants at the end of the practicum.



node	x (m)	y (m)
1	0	0
2	0	15
3	-5	15
4	0	20
5	10	15
6	20	15

element	A (mm ²)
1, 3, 6	2500
2, 4-5, 7-8	1000

$$E = 210000 \text{ N/mm}^2$$

$$F = 5 \text{ kN}$$