

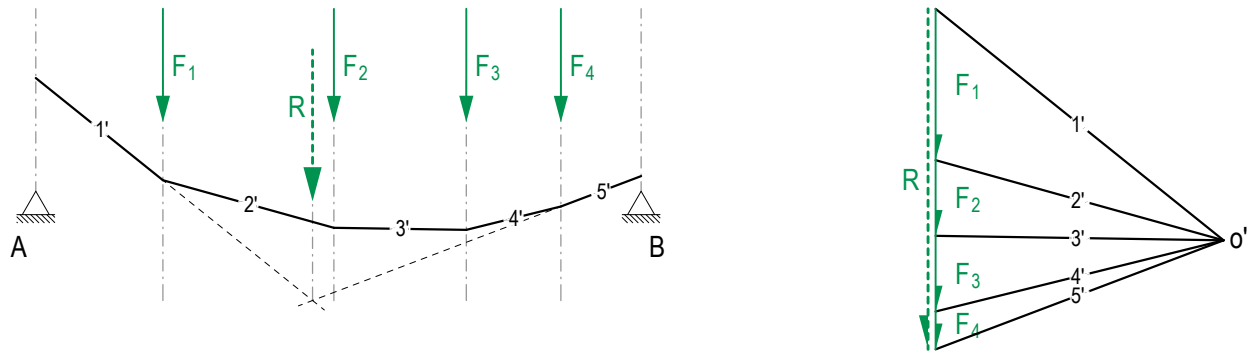
2.4

Form-Finding: Step by step

There are four unevenly distributed point loads and the two supports A and B. We want to find one of many possible supporting structures, which is in equilibrium under the given loading case.

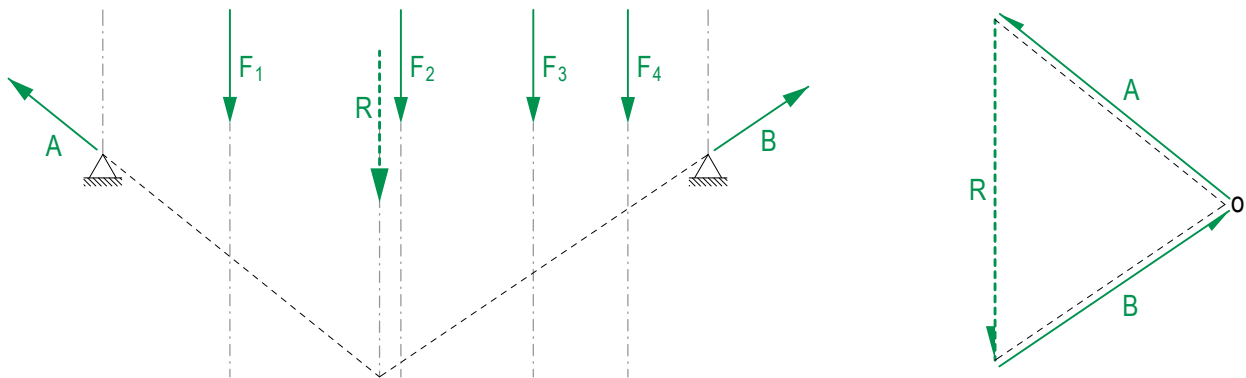
1. Resultant

After drawing the load line, the position of the resultant in the form diagram is found by using a trial funicular.



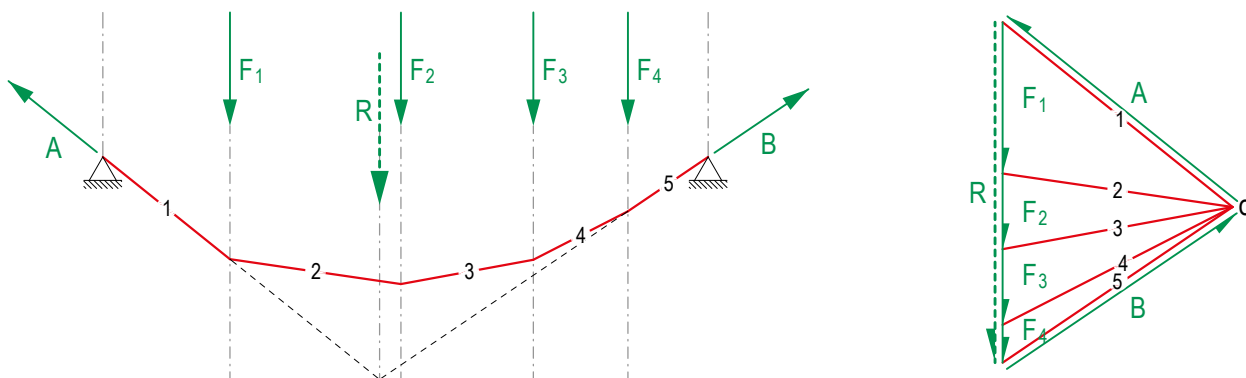
2. Global equilibrium

Now a point is fixed on the line of action of the resultant, and connected into the two supports. The resulting node illustrates the global equilibrium, i.e. the equilibrium between the resultant and the reaction forces.



3. Local equilibrium

Starting from pole o, the rays can now be drawn in the force diagram and transferred one by one to the form diagram



form diagrams 1:100

force diagrams 1cm ≙ 10kN