Reaction Forces

General Case

If the line of action of the resultant and the line of action of the reaction forces intersect in one point in the form diagram, the reaction forces can be determined graphically.

In the given example, the vertical line of action of support B intersects with the resultant. This point of intersection is then connected to the support A and thus the direction of the reaction force A is also found.



Parallel Forces

If the line of action of R is parallel to the lines of action of the reaction forces, the global equilibrium can be found with the help of a trial funicular. First, the load line is drawn in the force diagram. Then a pole o' is freely chosen and the rays are drawn to all beginnings and ends of the applied forces. These are then transferred in parallel to the form diagram. The closing string CS' thus found is finally moved parallel through o' into the force diagram and intersects the load line at point i. The so-called *closing string intersection point* i divides the load line into the two reaction forces A and B.





force diagrams $1cm \triangleq 10kN$