

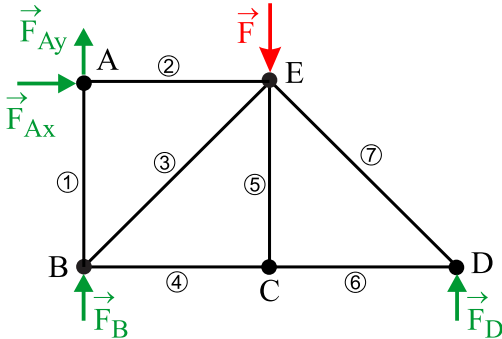
Description: A system of 7 straight bars, each of them being joint with at least one other bar; the whole system is supported by the base. All the joints among the bars can be modelled as pin supports, the external load \vec{F} acts in the joint E \Rightarrow the system meet the assumptions of an immovable plane framework.

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problem

framework

Isolation of the plane framework as a free body (from the base):

loading
tension



Statical analysis:

the necessary condition of the external statical determinateness: $\nu = \mu_{ex}$

$s_{ext} = \mu_{ex} - \nu = 4 - 3 = 1 \Rightarrow$ the problem is externally onefold statically indeterminate.

the necessary condition of the internal statical determinateness: $2k - 3 = p$

$s_{int} = p - (2k - 3) = 7 - (2 \cdot 5 - 3) = 0 \Rightarrow$ the problem is internally statically determinate.

The problem is onefold statically indeterminate (externally).

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