



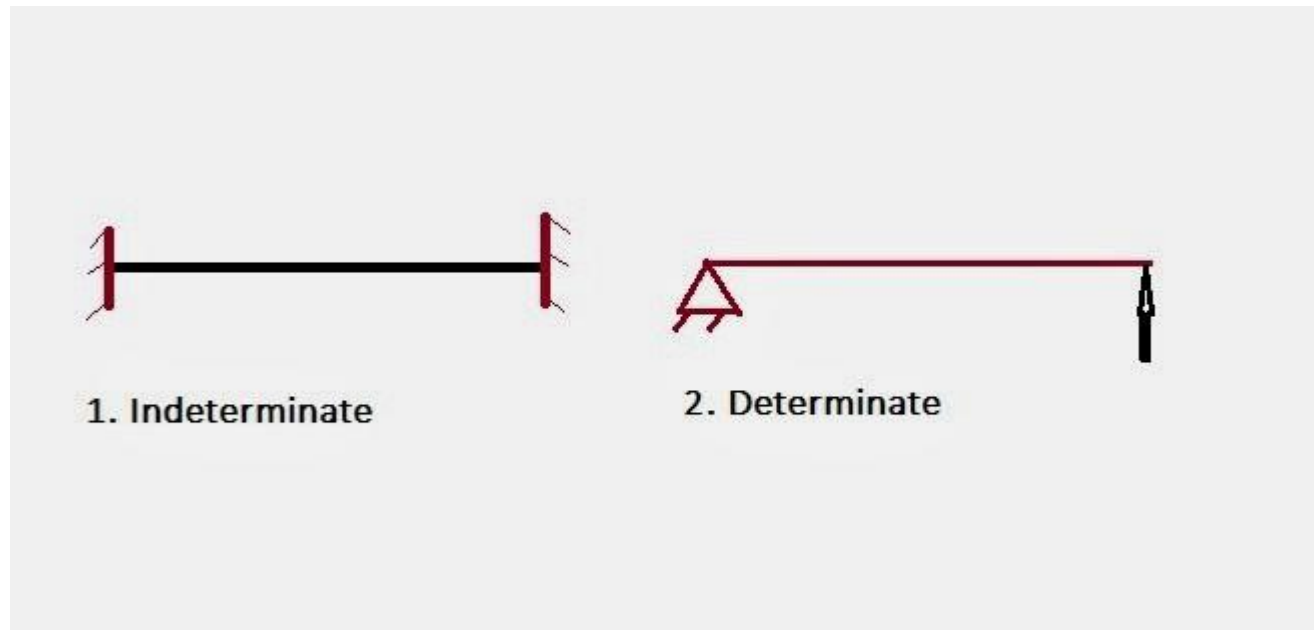
Theory of Structure

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Determinate and Indeterminate Structure

- ▶ A statically determinate structure is one that is stable and all unknown reactive forces can be determined from the equations of equilibrium alone. A statically indeterminate structure is one that is stable but contains more unknown forces than available equations of equilibrium.

Determinate and Indeterminate Structure

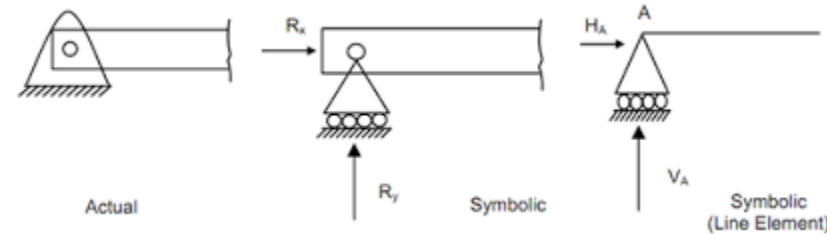


Support Condition

- ▶ **The beams usually have three different types of support:**
 - Hinged or pinned support.
 - Roller support.
 - Fixed support.

Hinged or pinned support

- ▶ Pinned support or hinged support **can resist both vertical and horizontal forces but they cannot resist moment.** It means hinged support is restrained against translation. Using equations of equilibrium, one can find out the components of horizontal and vertical forces.



Hinged or pinned support

