

Trusses

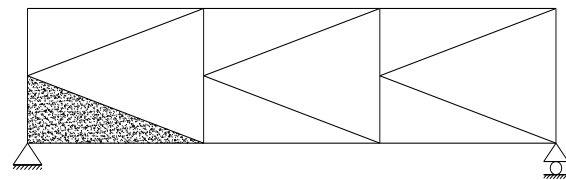
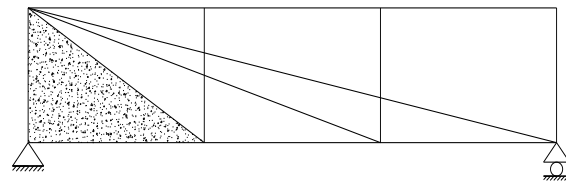
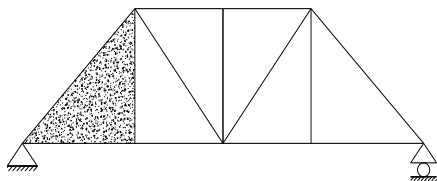
Trusses are used in bridges and ceilings with large spaces such as (factory ceilings, train stations, cinemas and Sports halls). Where they are in such cases are more economical than other construction systems.

Types of statically determinate trusses

Where $(b+r = 2j)$

1- Simple trusses

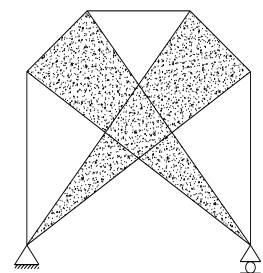
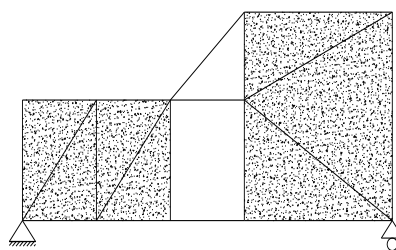
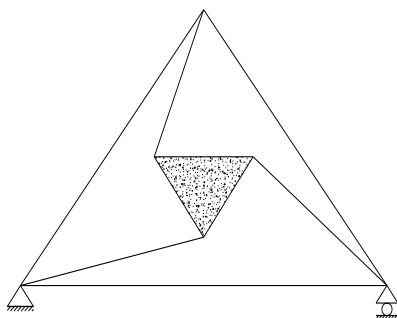
Consists a base triangle (3 members meeting at 3 joints) and any additional 2 members meet at an additional joint.



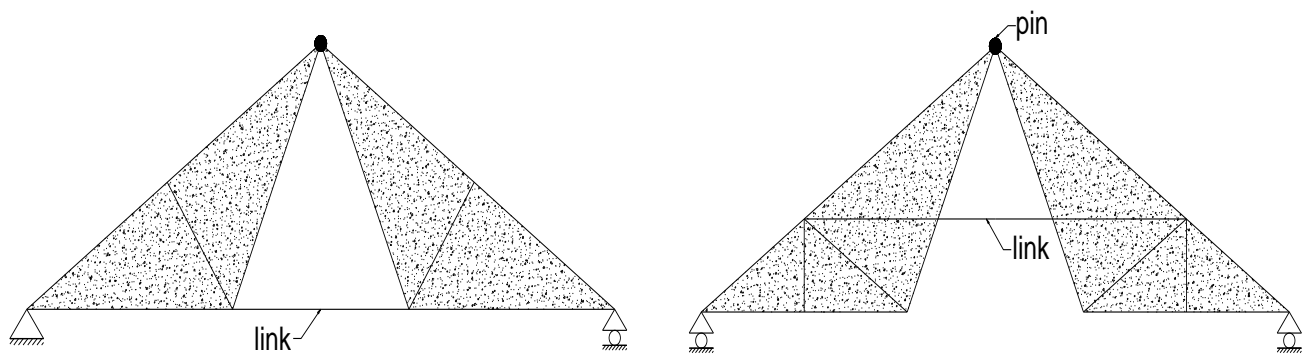
2- Compound trusses

Two or more simple trusses connected together by different means; such as

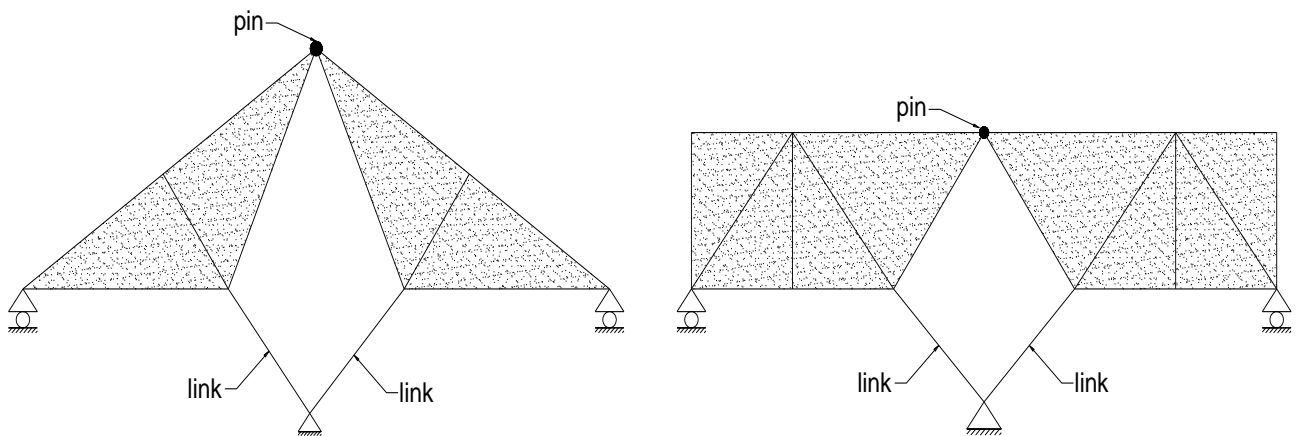
- i- Three links: that is neither parallel nor concurrent.



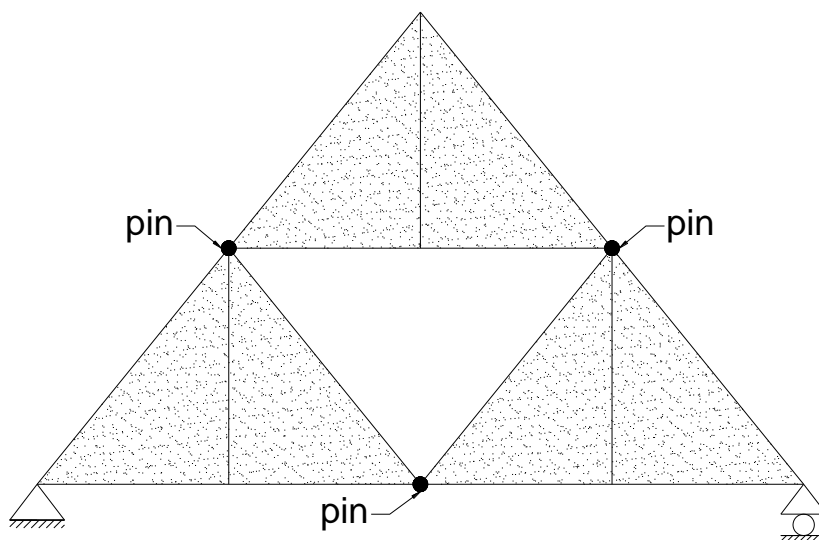
ii- A pin and link



iii- A pin and two links intersecting at support

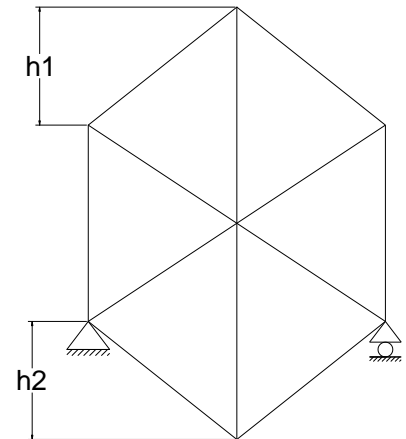
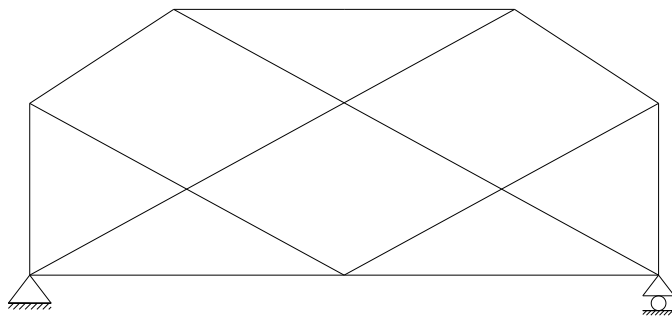


iv- Three pins



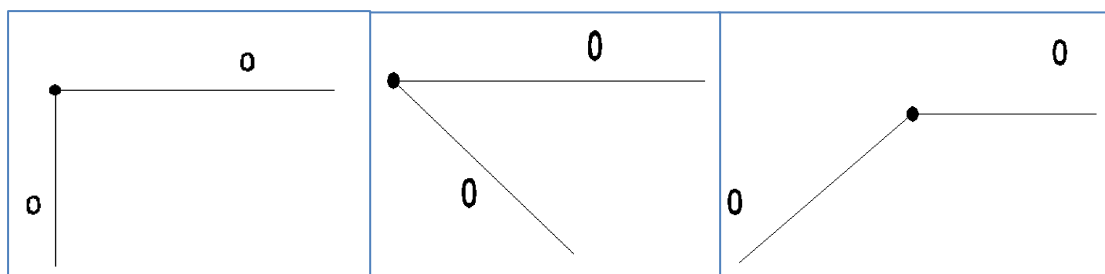
3-complex trusses

Each joint has at least 3 members. If a section is taken it will intersect so many members there force the truss cannot be easily (complex truss).



Important Notes:

1- When met two bars in joint not on one straightness and there is no external force on this joint, we conclude that the force in both bars equal to zero.



2- When met three bars in joint two of them on one straightness and there is no external force on this joint, we conclude that the force in third bar equal to zero.

