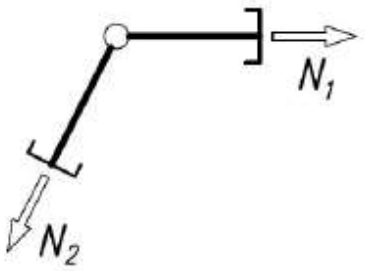
Number of Zero force members in Trusses

1. **If only two members join in unloaded node**

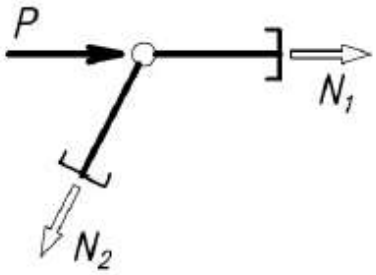
axial forces in both members equal zero.



$N_1 = N_2 = 0$

2. **If only two members join in node loaded with force parallel to one of them**

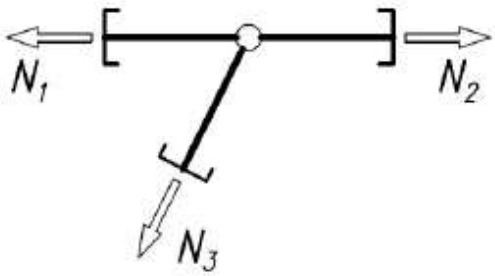
axial force in the second member equals zero.



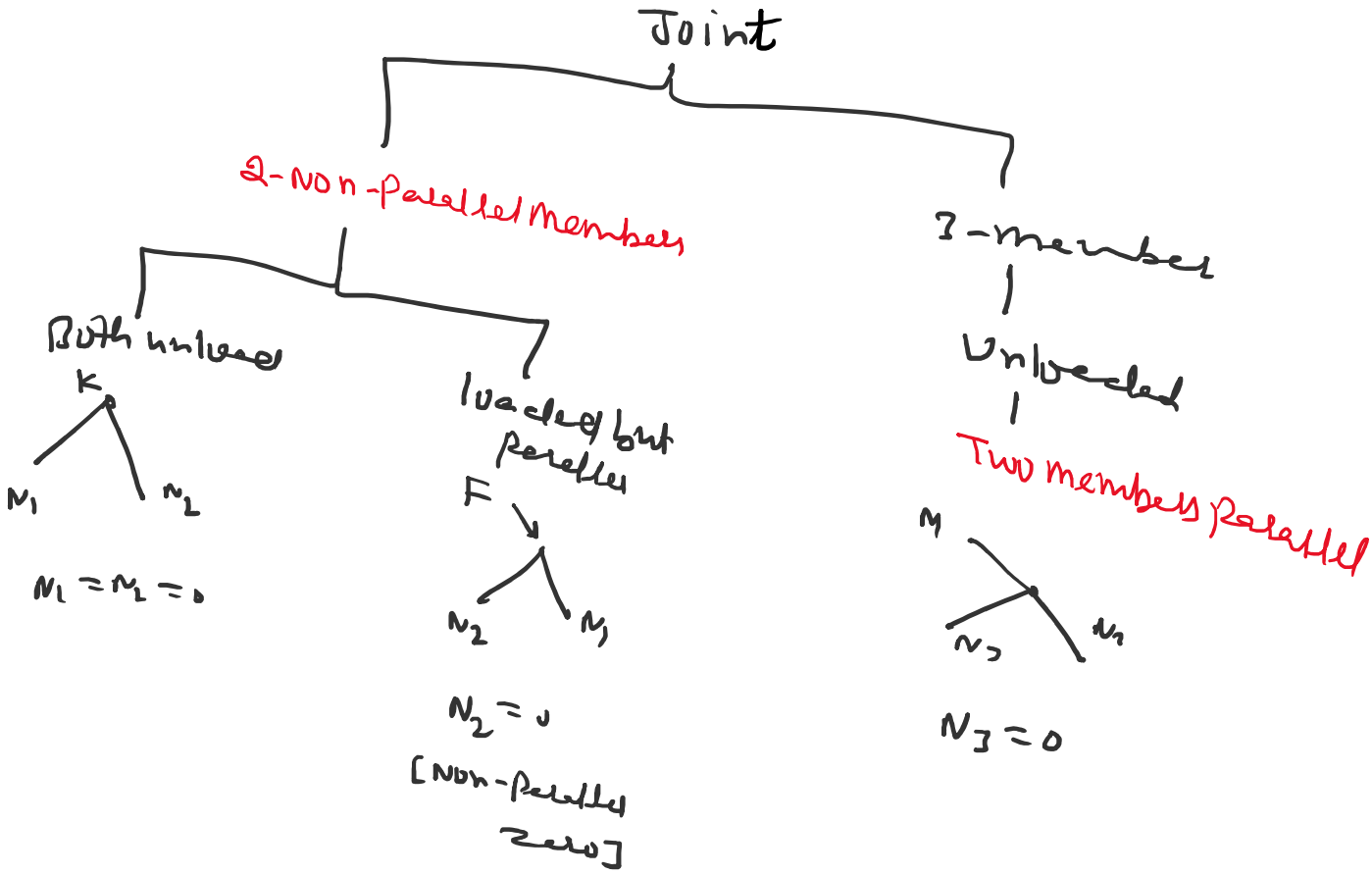
$N_2 = 0$

3. **If three members join in unloaded node and two of those members are parallel**

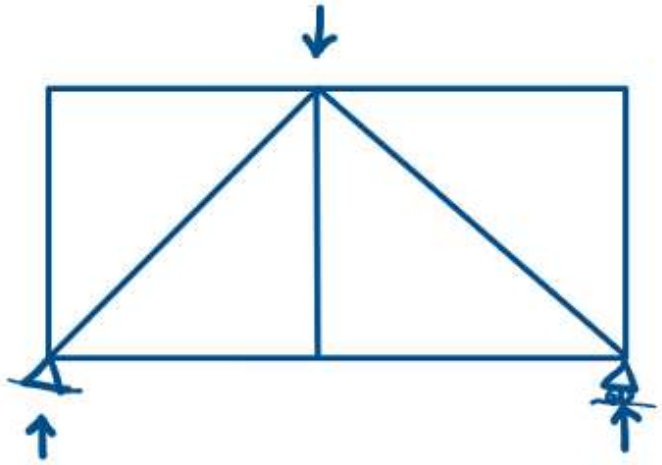
axial force in the third member equals zero.

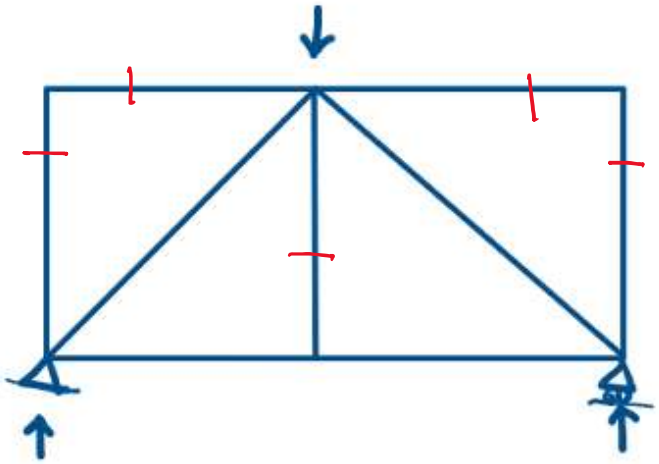


$N_3 = 0$

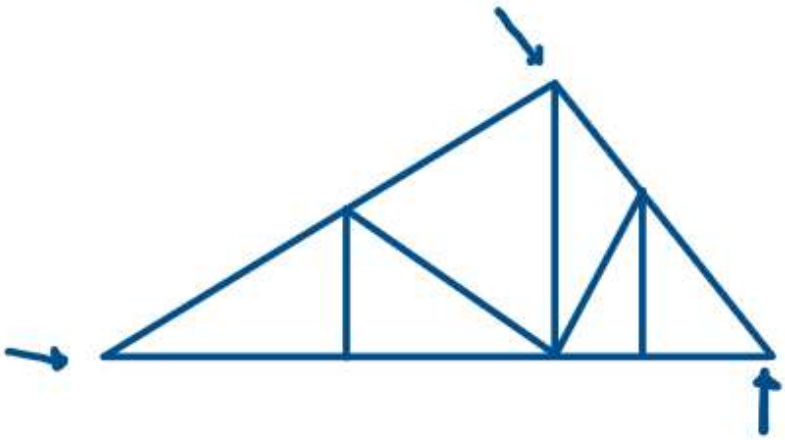

Joint
2-Non-Parallel Members
3-Members
Both unloaded
K
N_1
N_2
$N_1 = N_2 = 0$
loaded but Parallel
F
N_2
N_3
$N_2 = 0$
[Non-Parallel Zero]
Unloaded
Two members Parallel
N_3
N_1
$N_3 = 0$

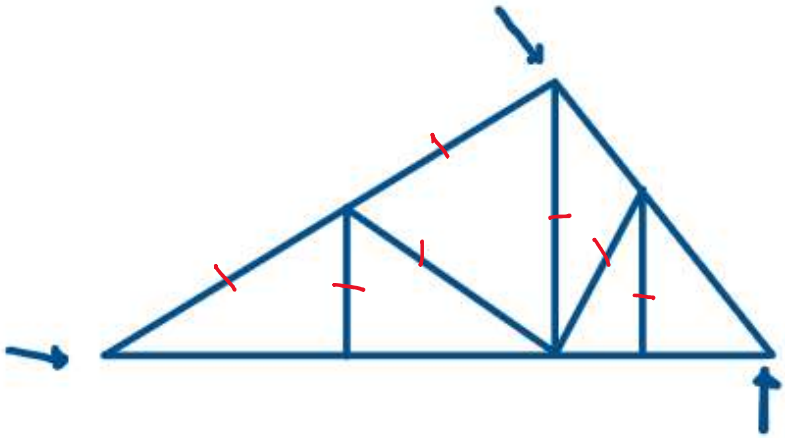
Find the number of zero forces members:



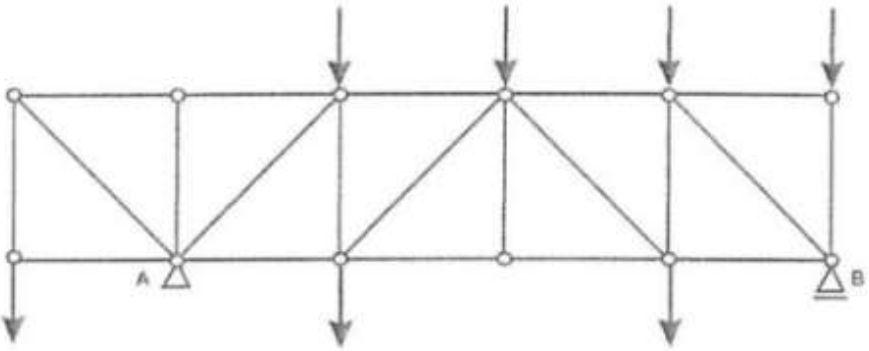


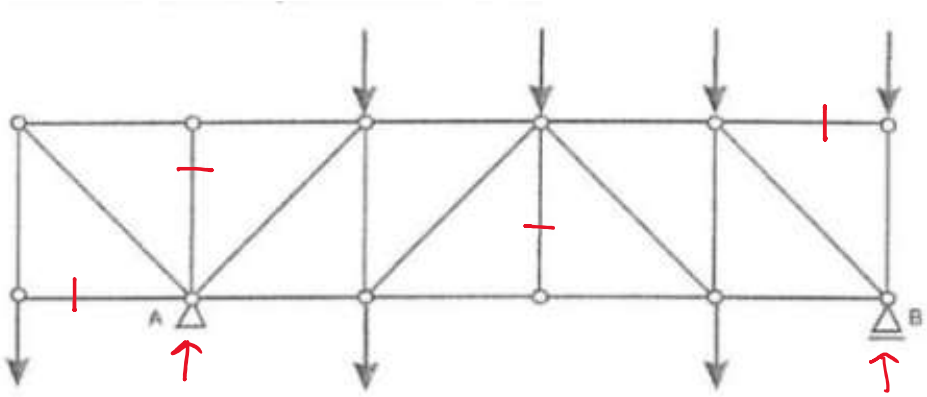
Find the number of zero force members





3. Please find „zero" members in truss presented below.





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