

In the truss shown below, all members have a cross-sectional area of A . Members HK, CD and BH are vertical, and members DH and BC are horizontal. A horizontal force P acts on joint H of the truss. All members are made up of a material having a Young's modulus of E and a Poisson's ratio of ν . The weights of the members should be considered negligible compared to the applied loads.

- Determine the load carried by each member connected to joint H.
- Determine the stress experienced by each member. For each, state whether the member is in tension or compression.
- Determine the change in length of member DH.
- Evaluate your answer in Part c) above using the following: $E = 30 \times 10^6$ psi, $\nu = 0.3$, $A = 3$ in², $d = 12$ in and $P = 20$ kips.

Do not substitute in numbers until Part d) of the problem.

