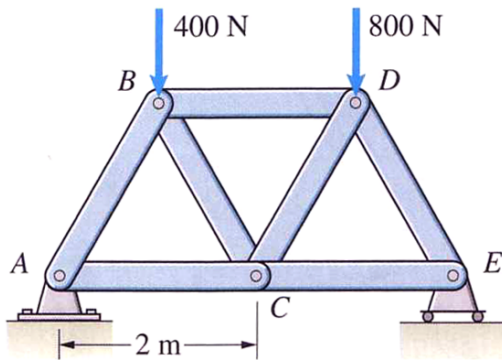


Method of Sections

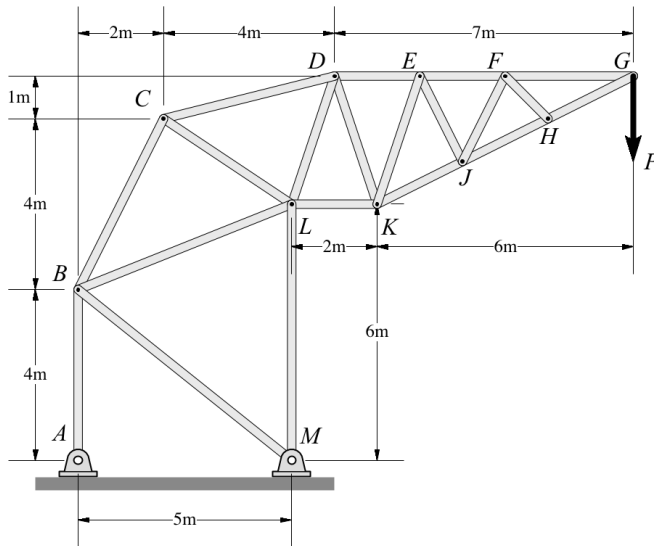
1. Treat the truss as a rigid body, and find the reactions. (Not always needed)
2. Take an imaginary cut and divide the truss into two parts by cutting through the member of interest, and no more than three members total.
3. Draw FBD of the simpler half of the truss. Assume the forces in the cut members are tension and directed along their associated members. (Arrows facing out)
4. Use standard methods for Equilibrium of a Rigid body to solve for the forces in the cut members. Negative values indicate compression. Take moments where two unknowns intersect if you can.
5. You may have to repeat the process with a different cut if you can't cut through all the members of interest with a single cut.

Example 1 Find the forces in member BD , BC , and AC , using the method of sections. All members are 2 m long.



Example 2

Find the forces in members CD , DL , and LK using the method of sections, knowing that $P = 5$ kN. For each member indicate tension or compression. Note in this case that the reactions at A and M are not required. Why?



Example 3

Determine the force in members FG and FH of the truss shown. Indicate tension or compression.

