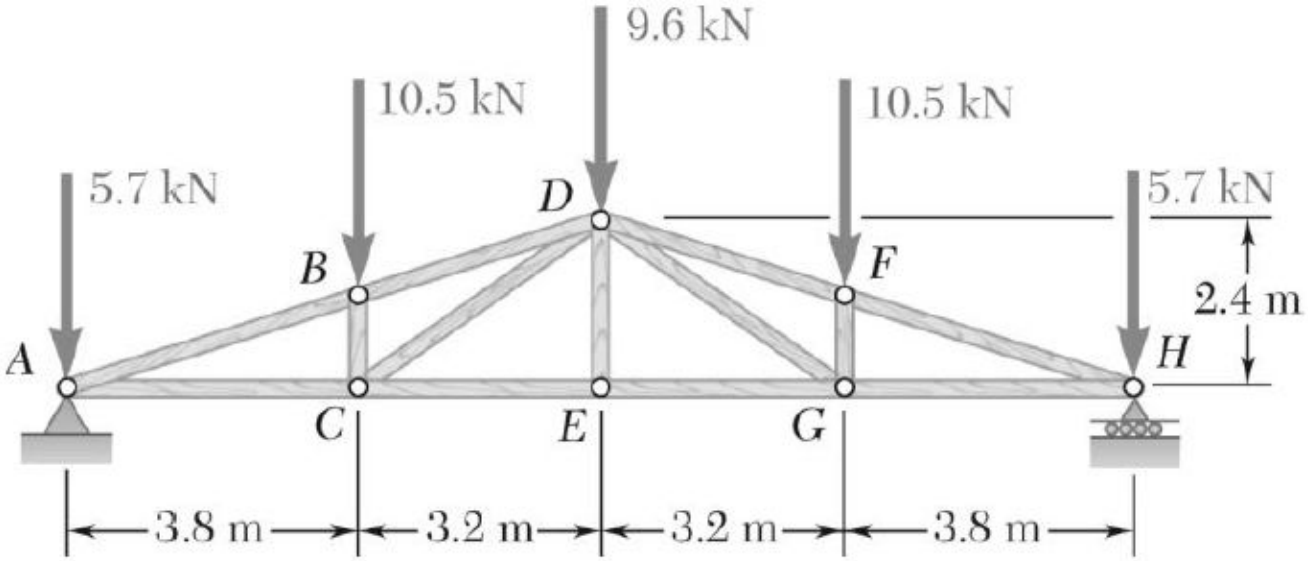
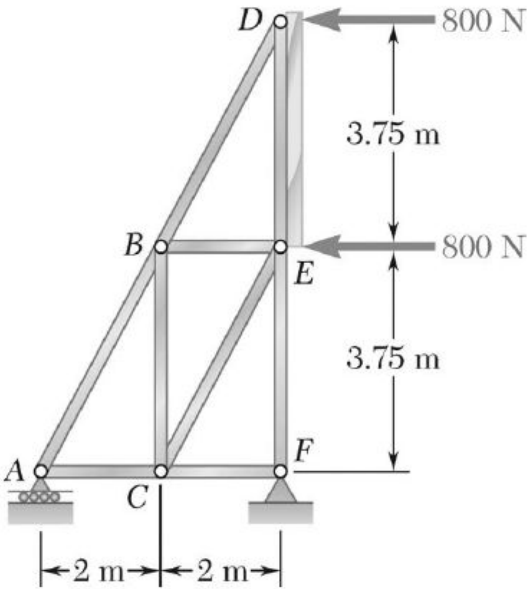
Tutorial Sheet - 4
Chapter 6
Vector Mechanics

Problem 1



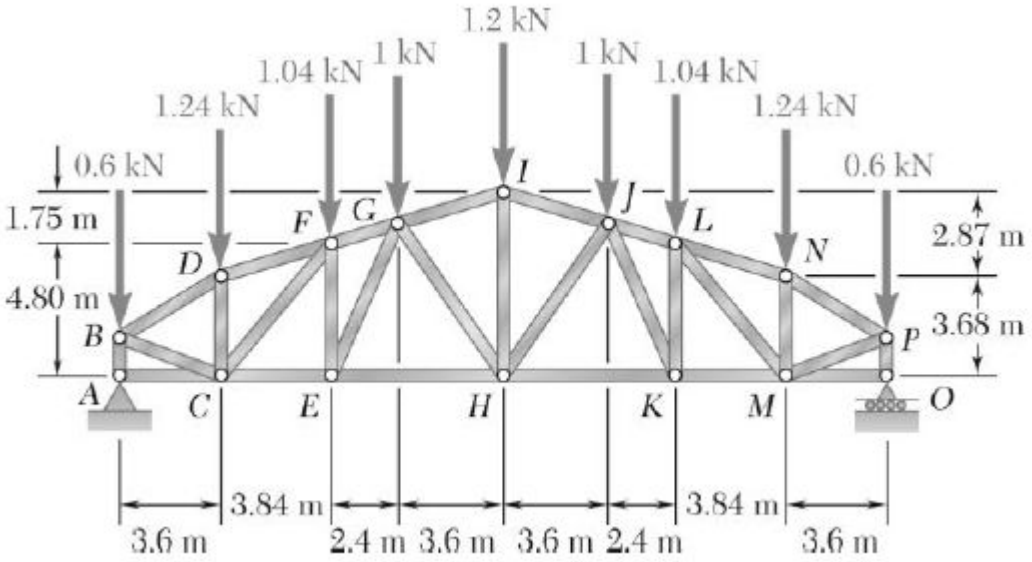
Determine forces in each member of the truss.

Problem 2



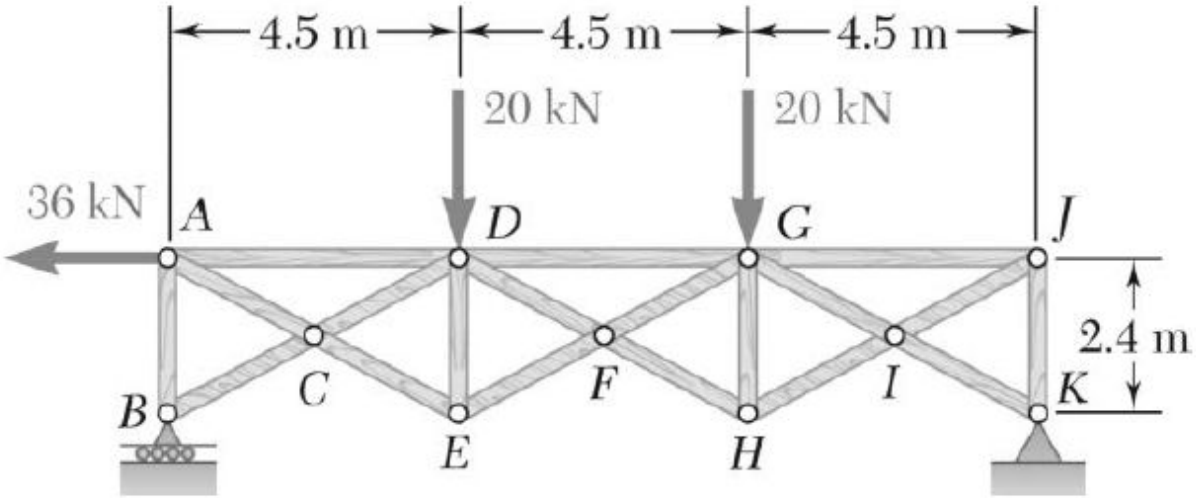
Determine
the force in each member of the truss for a wind load equivalent to the two
forces shown. State whether each member is in tension or compression.

Problem3

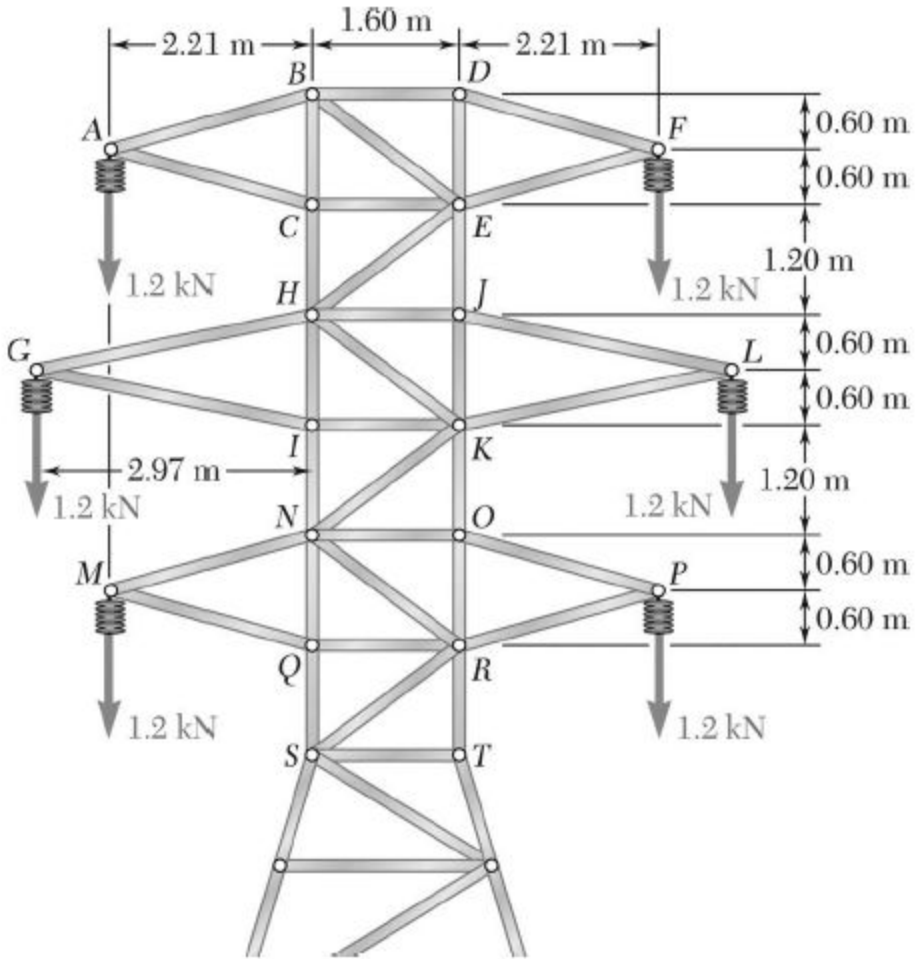


This is an example of a roof truss. Determine the forces in FG, EG, and EH

Problem 4



Determine the force in DG, FG, FH.

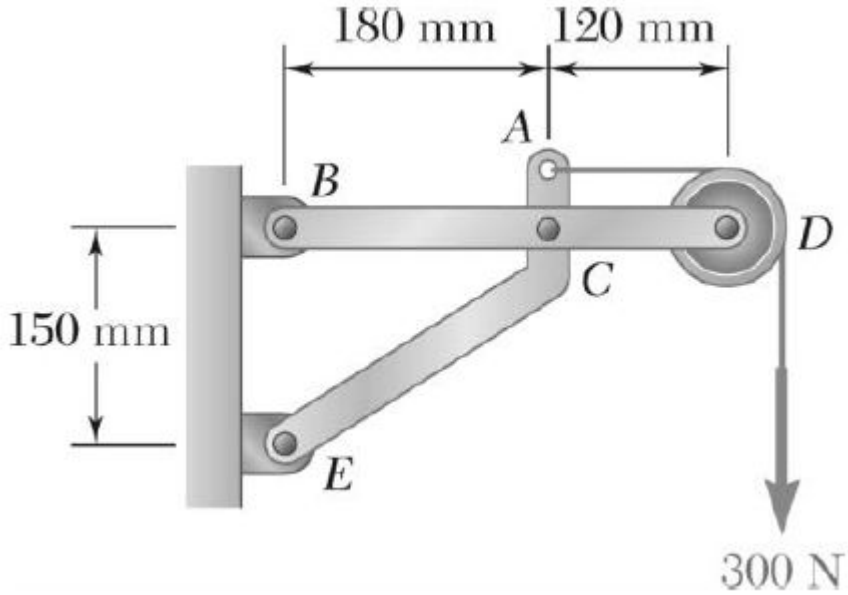


Problem 5

Determine the force in each of the members located
above HJ.

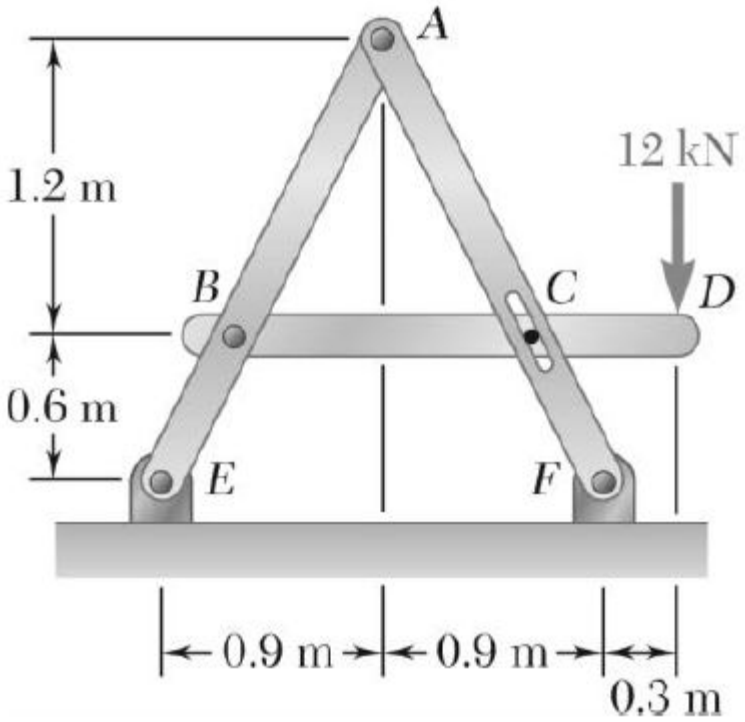
Identify where you see this type of truss.

Problem 6



Determine the components of the reactions at B and E.

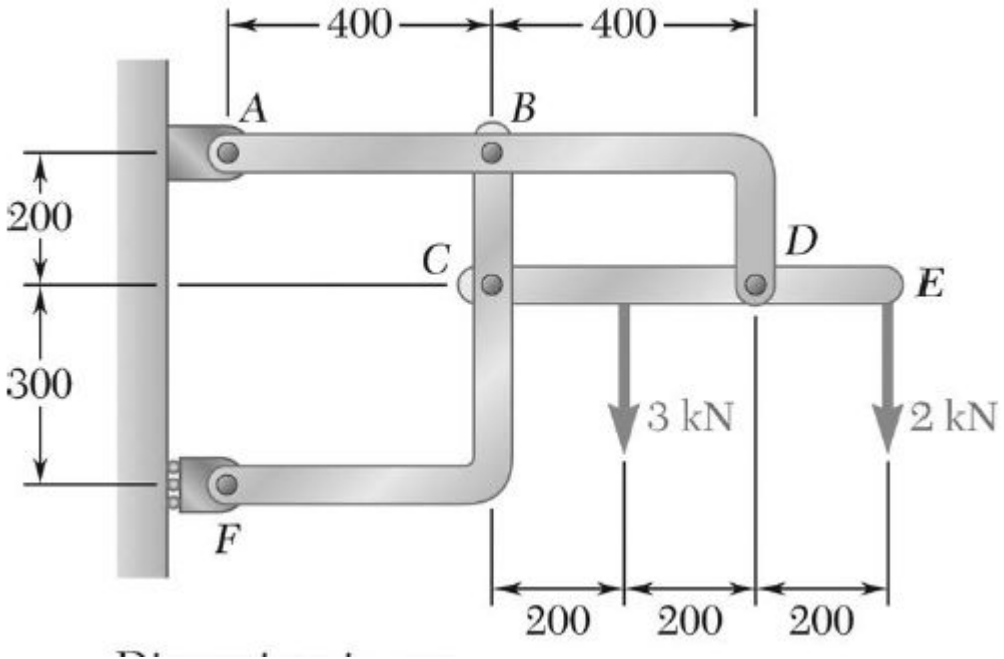
The diameter of the pulley is 480 mm.



Problem 7

Determine the components of all forces acting on member ABE.

Problem 8



Determine the components of all forces acting on member ABD.

Additional Problem

Try to locate/make a simple frame (may be a part of a bigger structure or a machine) and do the analysis of forces in each member of that frame.