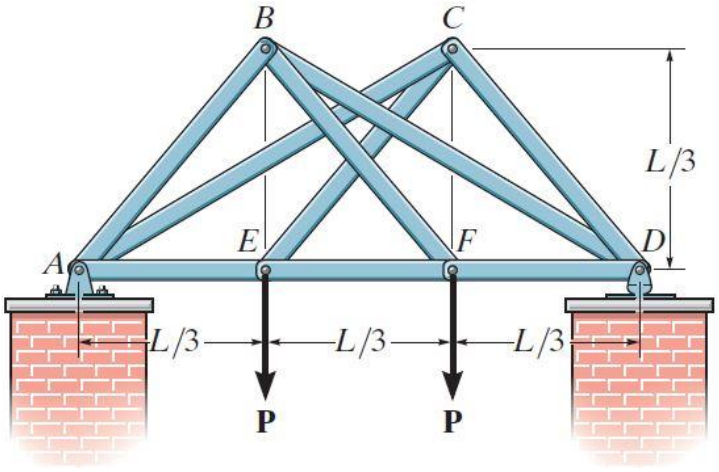
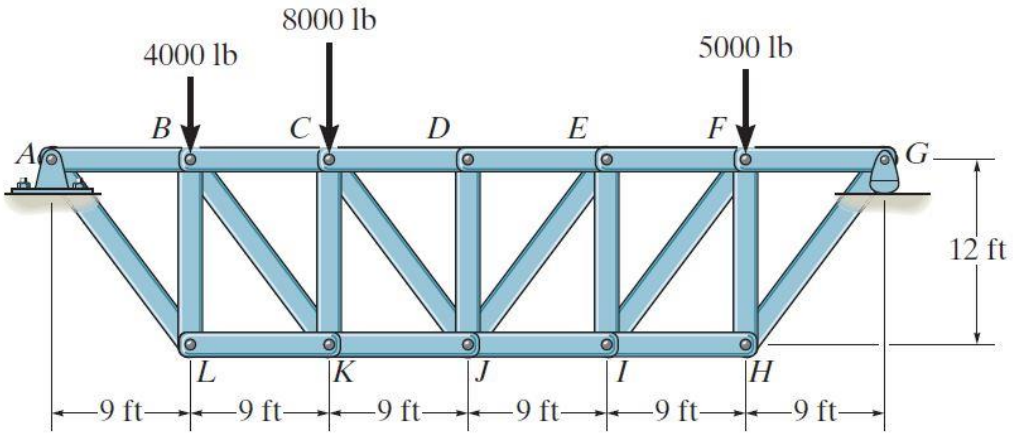
姓名：　　學號：

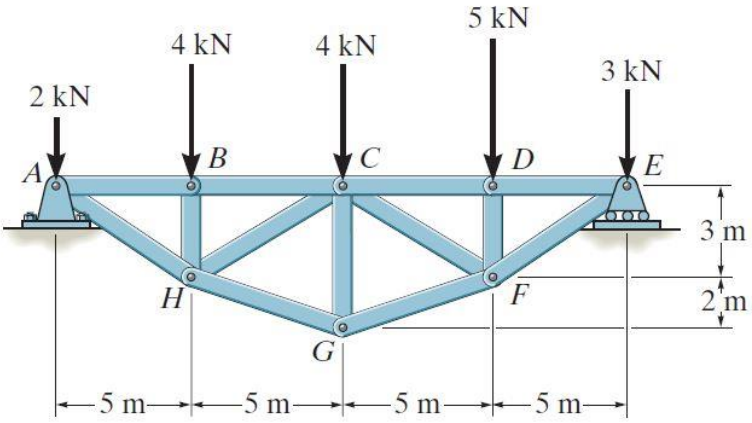
1. (10%) Determine the force in each member of the double scissors truss in terms of the load P and state if the members are in tension or compression.



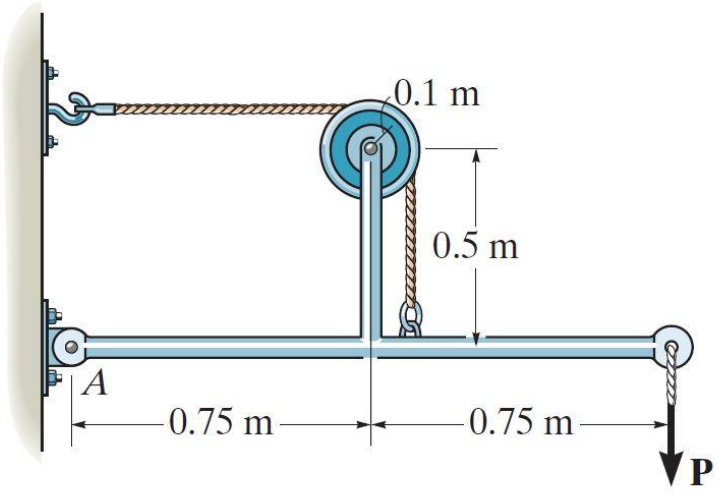
2. (10%) Determine the force in members CD, CJ, KJ, and DJ of the truss which serves to support the deck of a bridge. State if these members are in tension or compression.



3. (10%) Determine the force in members CD, CF, and CG and state if these members are in tension or compression.



4. (10%) Determine the greatest force P that can be applied to the frame if the largest force resultant acting at A can have a magnitude of 2 kN.



5. The piston C moves vertically between the two smooth walls. If the spring has a stiffness of k = 15 lb/in., and is unstretched when θ=0°, determine the couple M that must be applied to AB to hold the mechanism in equilibrium when θ=30°