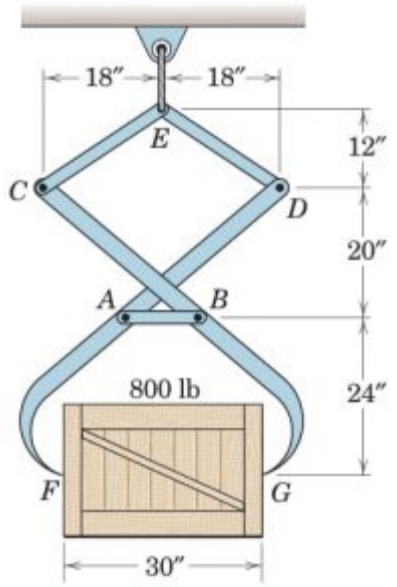
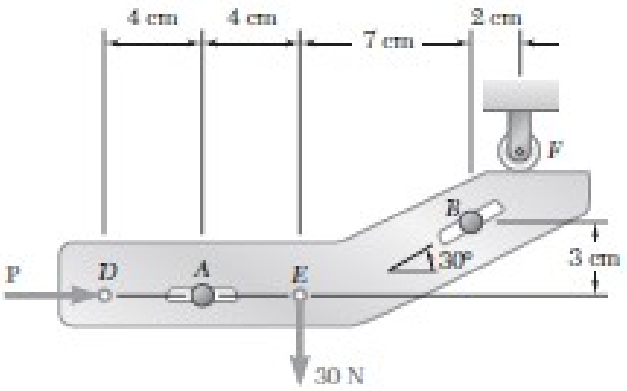
Practice Problems (Engineering Mechanics: ME102)

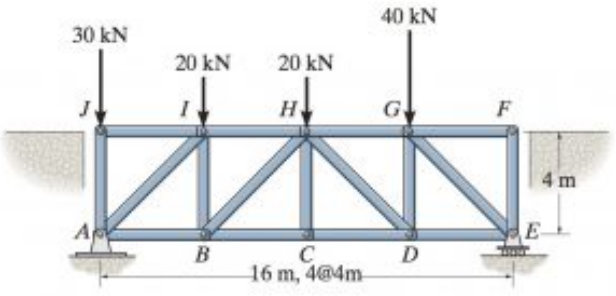
1. Compute the force in link AB of the lifting tongs which cross without touching.

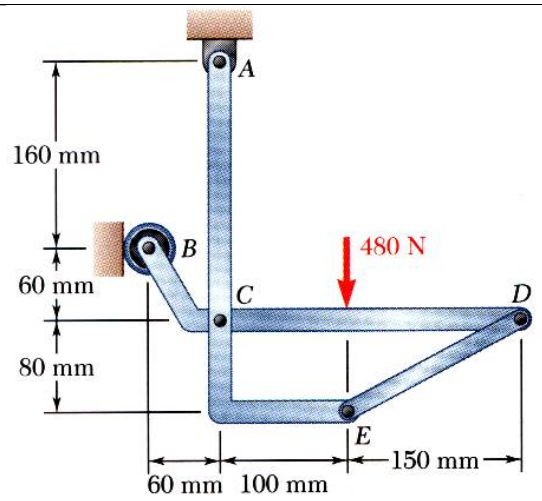
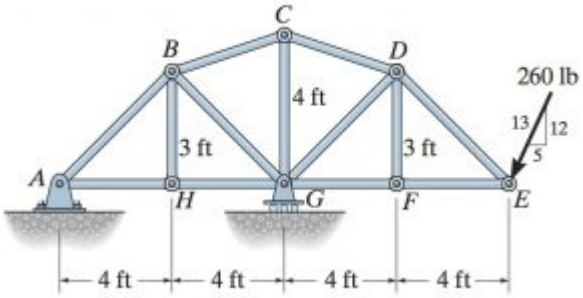


2. Two slots have been cut in plate DEF, and the plate has so that the slot fit two fixed, frictionless pins A and B. Knowing that P = 15 kN. Determine the (a) force each pin exerts on the plate (b) and the reaction force F



3. Using the method of joints, determine the force in members *EG*, and *ED*, and state if the members are in tension or compression.



4. Members ACE and BCD are connected by a pin at C and by the link DE. For the loading shown, determine the force in link DE and the components of the force exerted at C on member BCD.	
5. Find the force in member BG	
6. The truss is composed of equilateral triangles of side a and is supported and loaded as shown. Determine the forces in member CD.