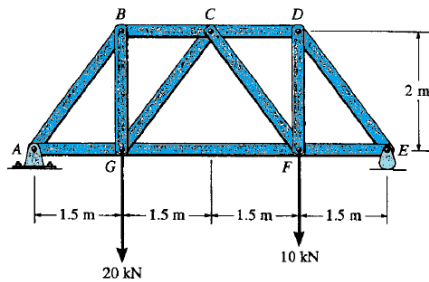
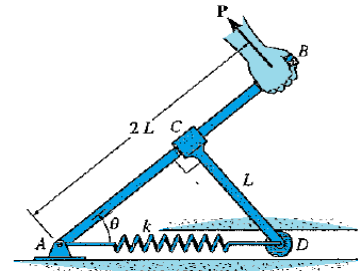


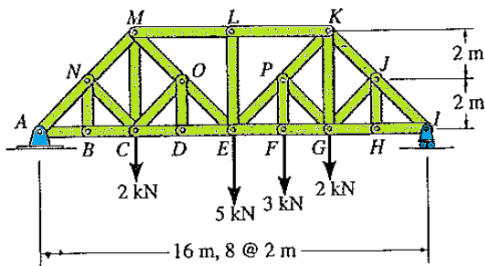
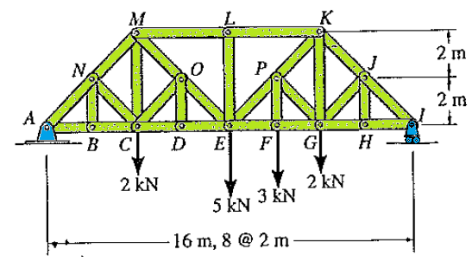


1. The two-bar mechanism consists of a lever arm AB and smooth link CD, which has a fixed collar at its end C and a roller at the other end D. Determine the force P needed to hold the lever in the position  $\theta$ . The spring has a stiffness k and unstretched length 2L. The roller contacts either the top or bottom portion of the horizontal guide.



2. Determine the force in each member of the truss and state if the members are in tension or compression. Use The Method of Section.

3. Determine the force in members CD and CM of the Baltimore bridge truss and state if the members are in tension or compression. Also, indicate all zero-force members. Use The Method of Section.



4. Determine the force in members EF EP, and LK of the Baltimore bridge truss and state if the members are in tension or compression. Also, indicate all zero-force members. Use The Method of Section.

5. Determine the force in members BG, HG, and BC of the truss and state if the members are in tension or compression. Use The Method of Section.

