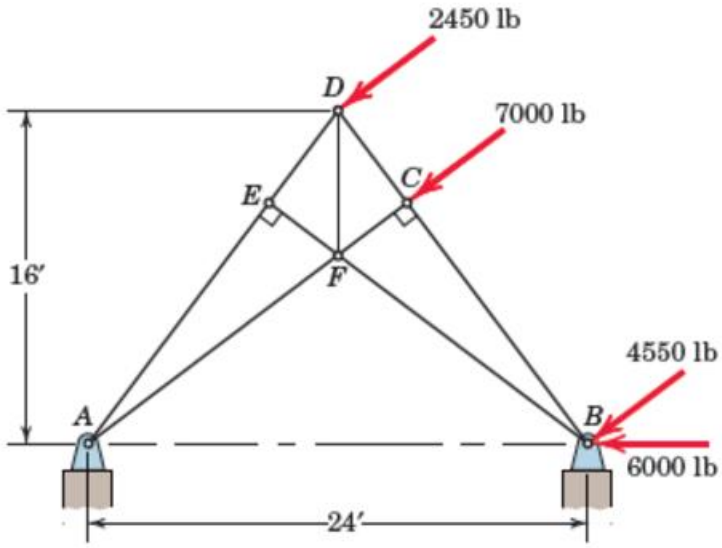
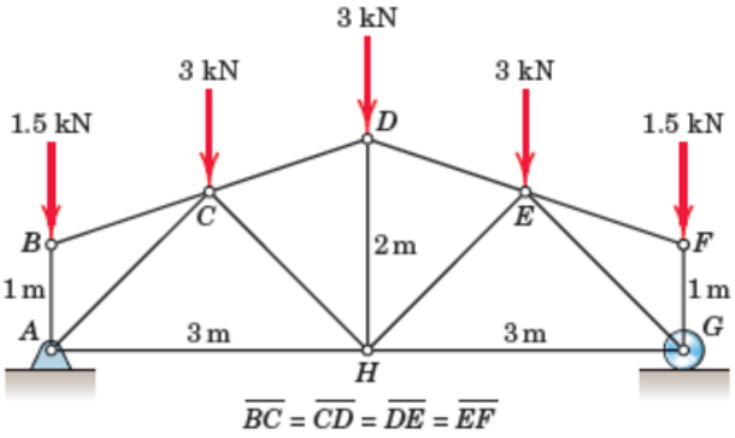
Problem 1

Analysis of the wind acting on a small Hawaiian church, which withstood the 165-mi/hr winds of Hurricane Iniki in 1992, showed the forces transmitted to each of the roof truss panel to be as shown. Treat the structure as a symmetrical simple truss and neglect any horizontal component of the support reactions at A. Identify the truss member which supports the largest force, tension or compression, and calculate this force. Lastly, use the method of sections to confirm the value of member BF.



Problem 2

Determine the forces in members CH, AH, and CD of the loaded truss.



Problem 3

Determine the magnitudes of the pin reactions at A, B, and C caused by the weight of the uniform 6000-lb beam.