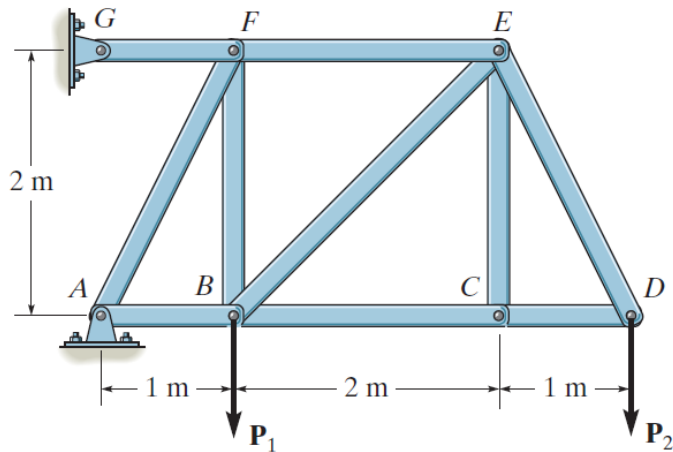University of California, Merced

ENGR 057 Statics and Dynamics: Assignment #4
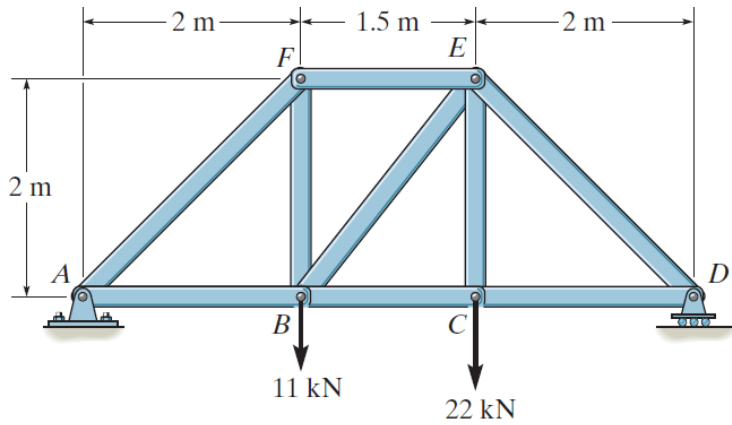
Summer - 2022

Due: July 21, 2022

Problem 1 (30 pts). Determine the force in each member of the truss and state if the members are in tension or compression. Set $P_1 = 8$ kN, $P_2 = 12$ kN. (Must include FBDs, use the method of joints)

Problem 2 (30 pts). Determine the force developed in members FE, EB, and BC of the truss and state if these members are in tension or compression. (Must include FBDs, use the method of sections)

Problem 3 (40 pts). Draw the shear and moment diagrams for the beam.

8 kN

15 kN/m

20 kN·m

B

A

—2 m——|—1 m—|——2 m——|———3 m———