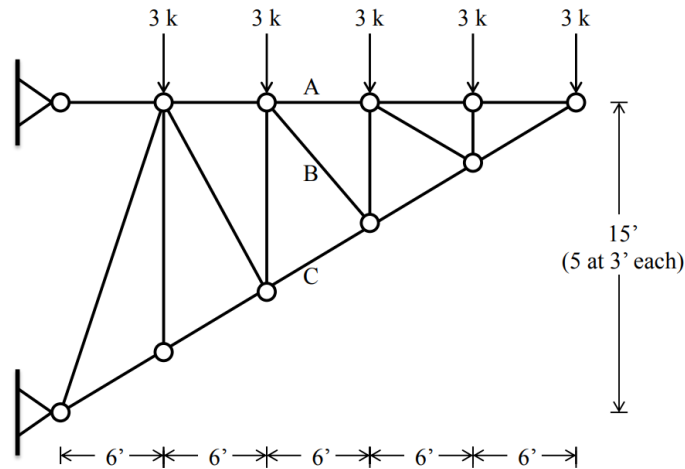Spring Semester, 2024

Homework 2
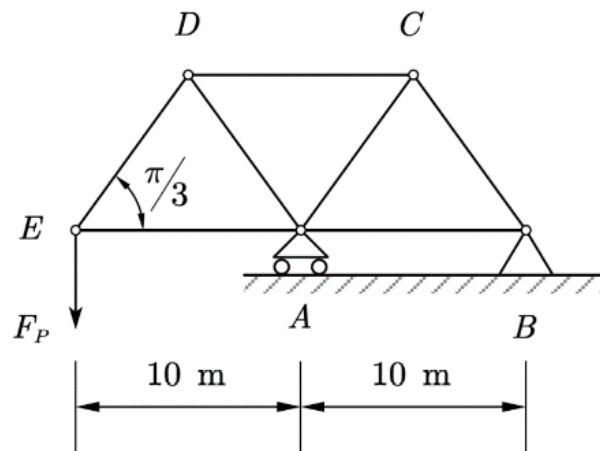
Due: February 23, 11.59 pm.

Question 1: 5 points

Using method of sections, determine the forces in members A, B, and C. State if the members are in tension or compression.

Question 2: 10 points

If the maximum force that any member can support is 17 kips in tension and 12 kips in compression, determine the maximum force F_P can be applied on the following structure (all the angles are $\pi/3$).

Question 3: 15 points

Determine the shear and moment throughout the beam. Draw the shear and moment diagrams for the beam. Draw the deflected shape of the beam.

0.5 k/ft

A   B   C   D

← 6' → ← 6' → ←   12'   →