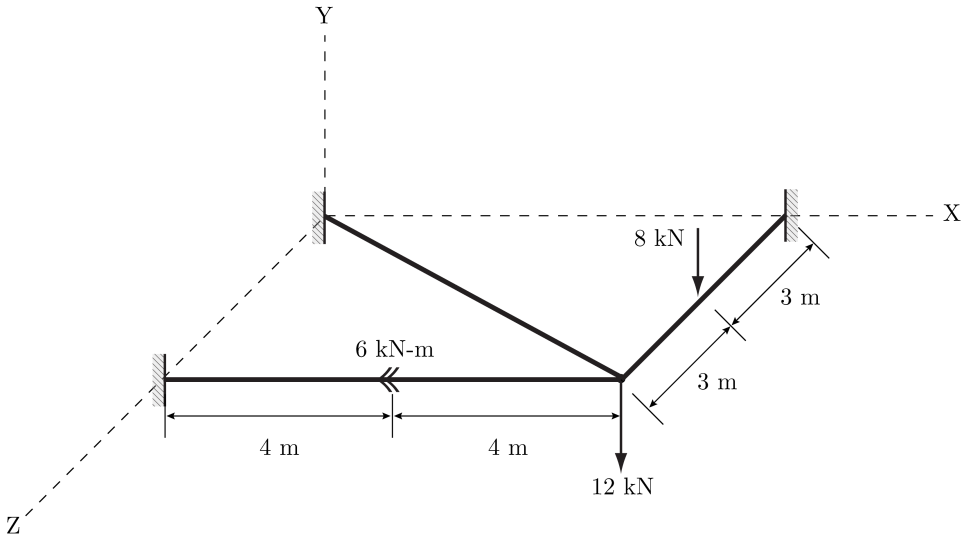
CE 525 Fall 2024 HW#6

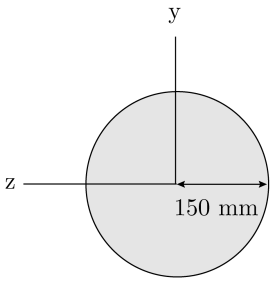
Due Tuesday, November 05 at the beginning of class

1. For the grid shown determine joint displacements/rotations, and support reactions, using the Matrix Displacement Method:

   a. (10 pts) By hand and computer programming

   b. (10 pts) Using SAP2000





E = 200 GPa; G = 76 GPa for all members

2. For each member:

   a. (10 pts) Draw torsional, shear force, and bending moment diagrams.

   b. (5 pts) Calculate the maximum normal stress (σ) and indicate location.

   c. (5 pts) Calculate the maximum shear stress (τ) and indicate location.