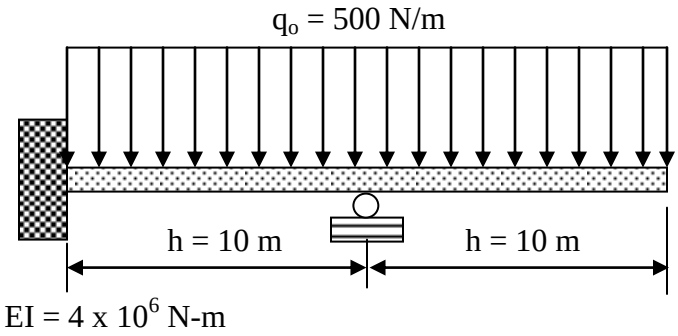
Due Date: November 10, 2015 NAME: _____

HOMEWORK SET # 6

ME/AE 5212 INTRODUCTION TO FINITE ELEMENT ANALYSIS

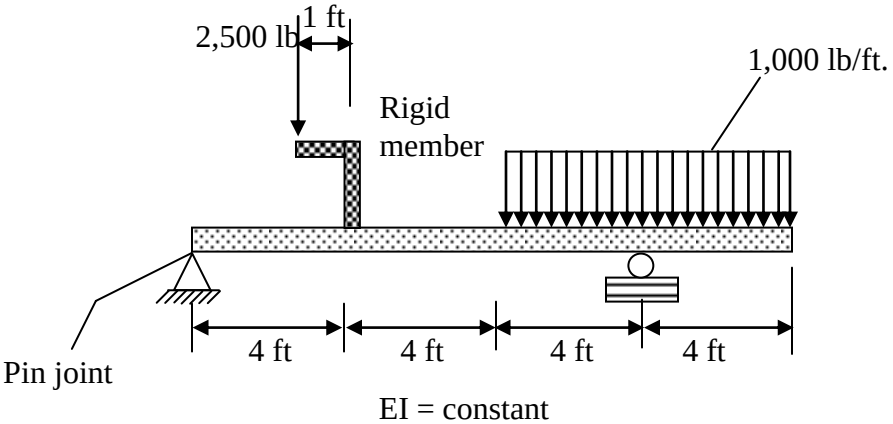
Solve the following beam problems using Euler-Bernoulli beam theory. Use the minimum number of elements. Determine the unknown displacements and slopes. Need a summary of the results with units. The summary should follow the problem statement. Also, provide the listing of sample data and output.

1.



(10 points)

2.



(10 points)

3. Solve problem #1 using **fem1d.** Use minimum number of elements. Compare the nodal displacements and slopes with hand calculation results. (10 points)

4. Solve problem #2 using **fem1d.** Take EI = 1. Use minimum number of elements. Compare the nodal displacements and slopes with hand calculation results. (10 points)