

CE 203 STRUCTURAL MECHANICS I

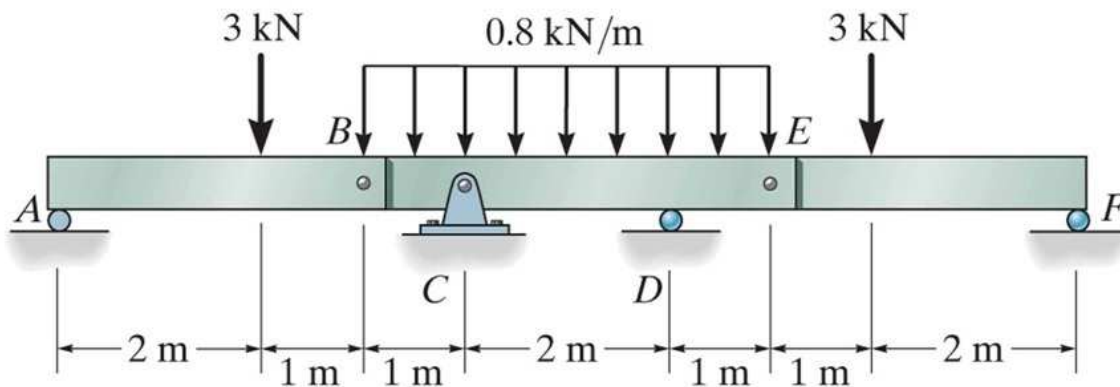
First Semester 2012 / 2013 (121)

HOMEWORK NO. 1

- **Textbook Sections Covered:** 1.1 – 1.4 , Review of Statics & Normal stress
- **DUE DATE:** Monday 10 September 2012

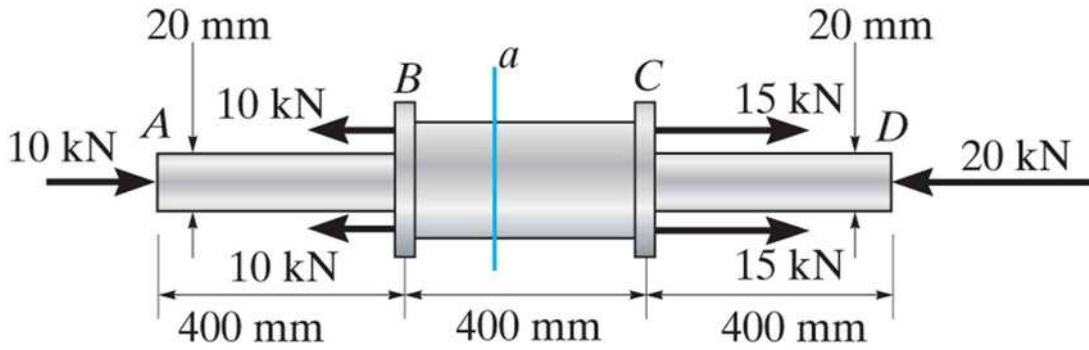
1- Use the figure and data for problem 1- 9 in the textbook. Determine the internal forces at point E , which is located at 2 meters to the right of support A.

2-The beam shown below consists of 3 parts connected together using pins at B & E. Determine all support reactions. Also , determine the internal forces at the center of the beam (5 m right of A).



- Continued on the next page

3 – The rod is made of 3 parts , which have circular cross sections. The diameter for parts AB & CD is 20 mm, and for part BC is 40 mm. Determine the average normal stress in each of the 3 sections.



4- Two horizontal rigid rods are supported using cables as shown. Determine the average normal stress in each cable. The cross sectional area of each cable is 20 mm^2 .

