CE383 STRUCTURAL ANALYSIS

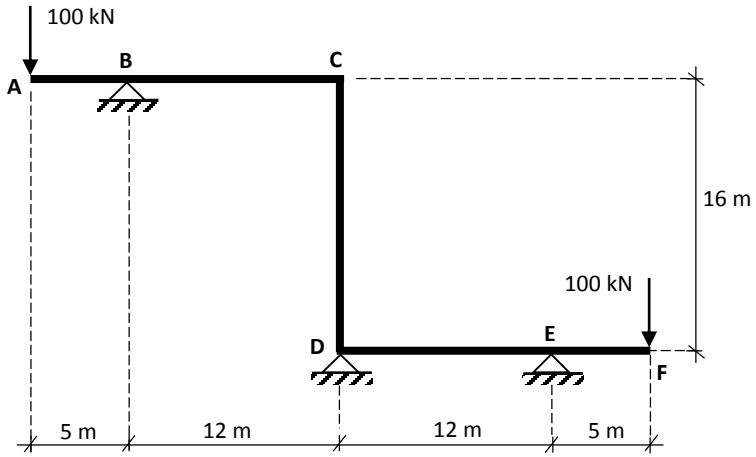
SPRING 2015

HOMEWORK 3

DUE: 11.05.2015 @ 13.00

Homework assignments submitted past the deadline will be accepted subject to a 20% deduction per day.

Q1) For given structure with axially rigid members that have constant and same *EI,* use moment distribution method and calculate the vertical reaction force at D.



Q2) As shown in the figure, the frame with axially rigid members is subjected to external loading and a support settlement of 2 cm at F. Assume constant $EI=2\times10^4\ kNm^2$ for all members.

- **a)** Find the end moments of this frame by using slope deflection method
- **b)** Find the end moments of this frame by using moment distribution method
- **c)** Draw the bending moment diagram for the entire structure. Do not forget to show your positive sign convention and directions of local axes.