CVG3140 **Assignment #5**

Displacement Methods

Issued: November 17, 2016
Due: Monday November 27, 2017 @ 5 pm
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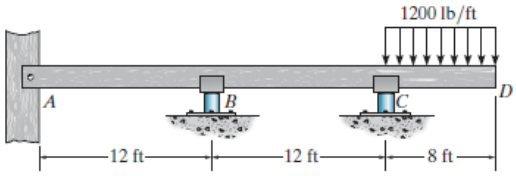
Marking: marked out of **20 marks**

A- Slope Deflection Method

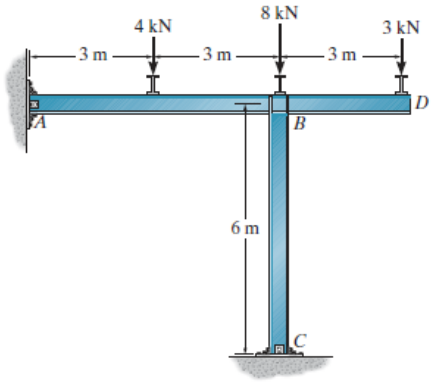
Problem 1

Determine the moments at B and C of the overhanging beam, then draw the bending moment diagram. EI is constant. Assume the beam is supported by a pin at A and rollers at B and C.



Problem 2

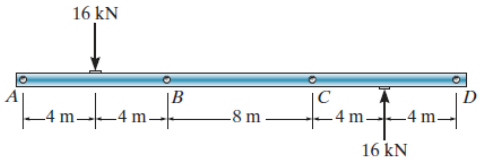
Determine the moments at the ends of each member of the frame. The supports at A and C and joint B are fixed connected. EI is constant.



B- Moment Distribution Method

Problem 1

The bar is pin connected at each indicated point. If the normal force in the bar can be neglected, determine the vertical reaction at each pin. *EI* is constant.



Problem 2

Determine the reactions at *A* and *D*. Assume the supports at *A* and *D* are fixed and *B* and *C* are fixed connected. *EI* is constant.