University of Massachusetts - Amherst  
Department of Civil & Environmental Engineering  
CEE 331: Structural Analysis  

Homework #1: Due September 16

Problem 1: For the truss shown in problem 3-4 of Hibbeler, show on clear diagrams a labeling scheme for the nodes, elements, and degrees of freedom that is consistent with the rules described in class. Indicate the direction of each element.

Problem 2: For the truss shown in problem 3-26 of Hibbeler, show on clear diagrams a labeling scheme for the nodes, elements, and degrees of freedom that is consistent with the rules described in class. Indicate the direction of each element.

Problem 3: For the truss shown in problem 14-7, show on clear diagrams the element coordinate system for elements 1 and 2.

Problem 4: Make a clear drawing of an 2D idealization of one of the roof trusses shown below. Clearly show boundary conditions, loads, and whether joints are pins or moment connections. It is a roof structure at a lodge in Acadia National Park

Remember that all homework must be done on engineering paper, and that each problem should be started at the top of a fresh page. Box all answers and write the names of collaborators at the top of the first page.