

## MAE 415 – Analysis of Structures

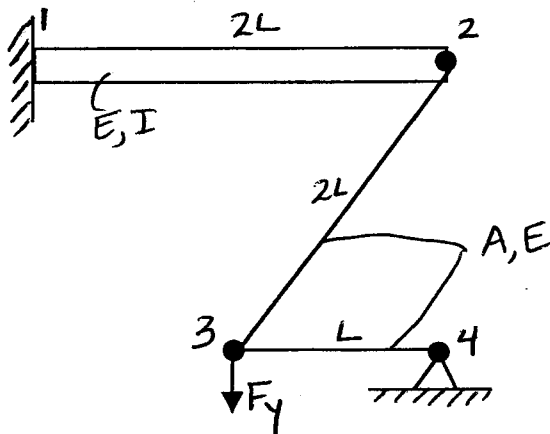
Instructors: Bloebaum/Hulme

Assignment #9

Due date: 11/3/00, BEFORE class begins

Class web page: <http://www.eng.buffalo.edu/~clb/mae415.html>

1. For the beam/truss structure shown, find vertical deflection at node 3.



2. In this course, we will introduce you to a commercial Analysis software package, known as *VisualAnalysis*. Knowledge of this software will be beneficial for the course project when the time comes to re-design your Trebuchet. For this assignment, we would simply like you to begin familiarizing yourself with the software. To accomplish this, we will ask you to complete the short and simple demonstration exercise, which is an analysis of a **2-D cantilevered portal frame**. Please refer to the following links to attain a basic description of the software, as well as help guides and other documentation, including a step-by-step tutorial through the portal frame example:

- *Software description:*

<http://www.iesweb.com/visualanalysis.htm>

- *Manuals and Other Documentation:*

<http://www.iesweb.com/manuals.htm>

Plan to hand in the following (**one submission per Trebuchet group**):

- a. 2 or 3 pages of Post Processing results from the demo (i.e. a screen capture of the displaced model, graphs of shear force, bending moment, and displacement for a few of the members, tables of result reports such as nodal displacements and/or member forces).
- b. A very brief (i.e. ONE paragraph) commentary on your results.
- c. A very brief (i.e. ONE paragraph) discussion on a basic “game plan” for making use of this software to enhance your Trebuchet re-design.