

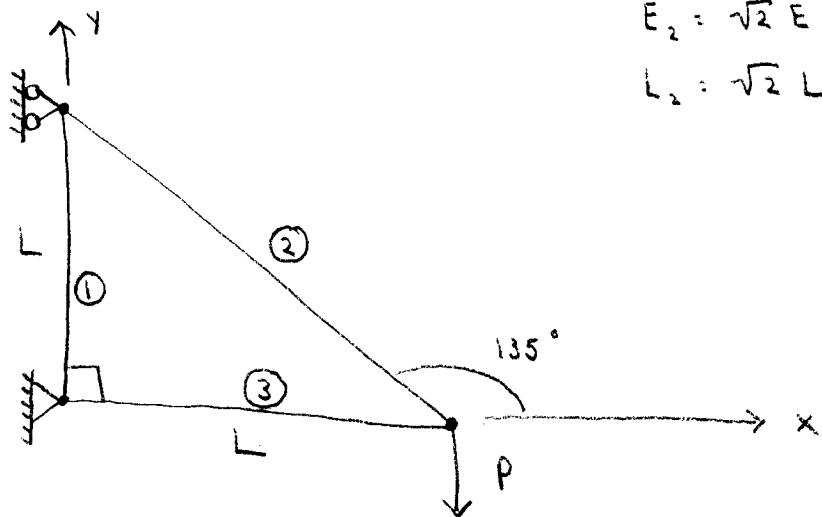
MAE 415 – Analysis of Structures

Bloebaum/Hulme

Homework #10, Due: November 10, 2000 (Before class)

WWW: <http://www.eng.buffalo.edu/~clb/mae415.html>

Given: The truss structure as shown.



$$A = 1 \text{ m}^2$$

$$E = 1.0 \text{E}10 \text{ Pa}$$

$$L = 10 \text{ m}$$

$$P = 1000 \text{ N}$$

- Write out the local (element) stiffness matrix for each truss element.
- Construct the global (system) stiffness matrix, based on your work in part a).
- State, and describe (in one sentence each) the 6 “known” pieces of information which allow us to solve this system.
- Using Matlab or Excel, determine the solution to this system. Include a printout of your results.