2.094

FINITE ELEMENT ANALYSIS OF SOLIDS AND FLUIDS

SPRING 2008

Homework 9

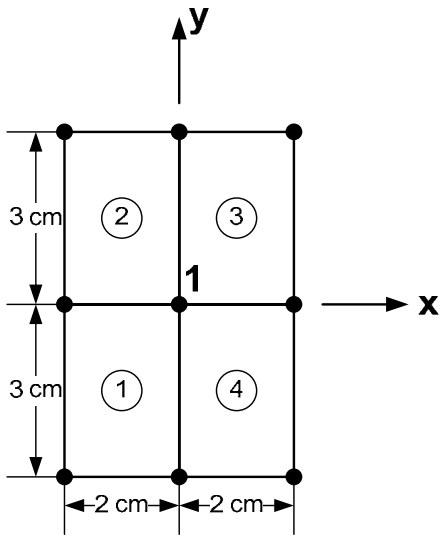
		Assigned:	04/17/2008
Instructor:	Prof. K. J. Bathe	Due:	04/24/2008

Problem 1 (10 points):

Complete Exercise 7.4 in the textbook, page 660, but consider only steady-state conditions.

Problem 2 (10 points):

Evaluate the torsional rigidity of the rectangular shaft using the finite element model given below. (Refer to Example 7.7 in the section 7.3.3, pages 664~666)



Problem 3 (10 points):

Exercise 7.28 in the text book, page 693. Use the coarse mesh emailed to you and refine it to obtain an accurate result. Compare the calculated pressures and velocities with the analytical solution. (Assume that the pressure at inner cylinder is zero.)

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