

University of Massachusetts, Amherst
Department of Civil & Environmental Engineering
CEE 630: Advanced Solid Mechanics (Fall 2009)

Homework #2: Due September 29

Problem 1: 1.4 Solve this problem by computing the traction vector on the glue plane. In determining the maximum load and glue plane angle, neglect the limiting stress on the bar itself, checking only stresses on the glue plane. **Note:** The problem refers to Fig. 1.5a on page 10, *not* Fig. P1.5 on page 39.

Problem 2: 1.7

Problem 3: 1.27 Compute the principal stresses and directions by solving the eigenvalue problem for the 2×2 stress matrix.

Problem 4: 1.46. Perform the computations by hand for all three eigenvalues.

Problem 5: 2.3 also check whether the strains satisfy the equations of compatibility.

Problem 6: Approximately how many hours did you spend on this assignment?