

3.11 Problem Set #2
Fall 2003
Due Friday, September 19, 2003

1. Show that for static equilibrium, the stress matrix is symmetric ($\sigma_{ij} = \sigma_{ji}$).
(e.g. Use 3-D Static equilibrium laws to prove $\sigma_{12} = \sigma_{21}$)

$$\begin{vmatrix} \sigma_{11} & \sigma_{12} & \sigma_{13} \\ \sigma_{21} & \sigma_{22} & \sigma_{23} \\ \sigma_{31} & \sigma_{32} & \sigma_{33} \end{vmatrix}$$

2. Write Inverse of S_{ij} in terms of E , G , ν
3. 7.2-1
4. 7.2-6
5. 7.5-3
6. 7.5-8