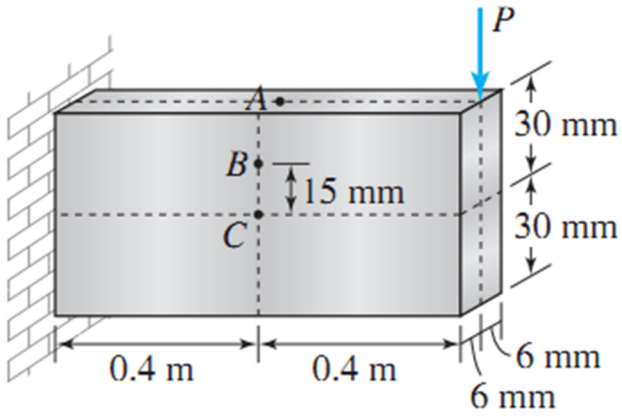
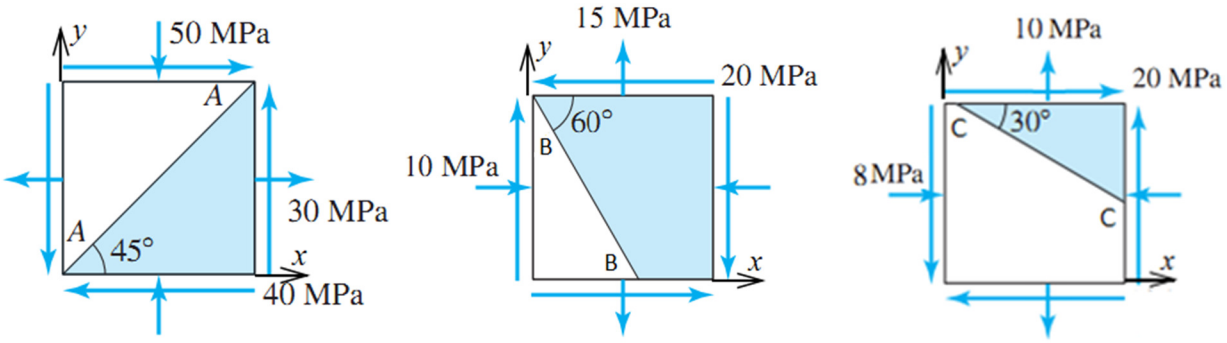
Take home Assignment Due November Wednesday 30th

Question #1) For the given beam shown below



At Points A, B & C the stresses are:



Determine:

- The Maximum Shear Stress and Principal Stresses that are applied onto the beams at the angle of the shear stress given per each location.
- Determine the Maximum Load "P" from this Maximum Stresses (Please note the difference between normal and Shear Stresses).
- Choose a material for the beam and explain why (this requires more explanation than in the quizzes).
- Draw the shear and moment diagrams for the beam with the maximum "P"

Perform this calculations using:

a) The system of equations on Chapter #7.
b) Mohr Circles.
c) MD Solids Computer software. (This does not mean simply print the report). This part will require the student the explanation and understanding and explanation of Strain Rosettes (discussed next week in class)