# CE224 Strength of Materials
# Fall 2015
HW-3

Due: 25/12/2014

1) The state of stress shown belongs to a point in a structure made with a material having a tensile strength of 200 MPa.

   a) Determine the available factor of safety for this point with respect to maximum tensile stress.

    b) Determine the available factor of safety for this point with respect to maximum shear stress.
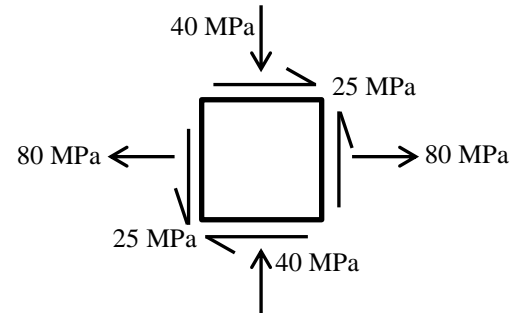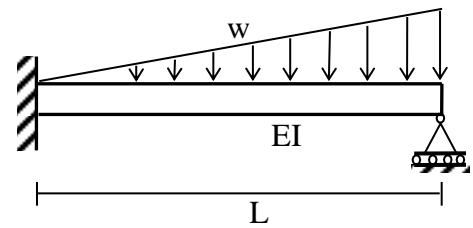

2) Two stress states shown below belong to the same point in a structure. Determine τ, σ_y', τ'.
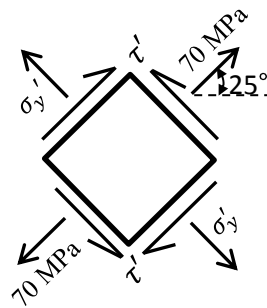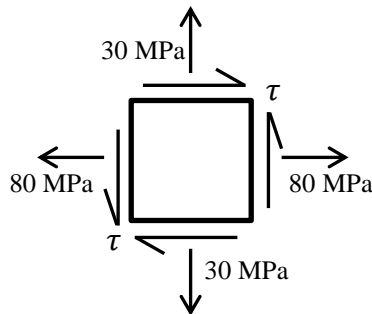
2) The pressure vessel with inner pressure p=0.1MPa is subjected to the loading shown. Determine the principal stresses at A and B (Section I-I').
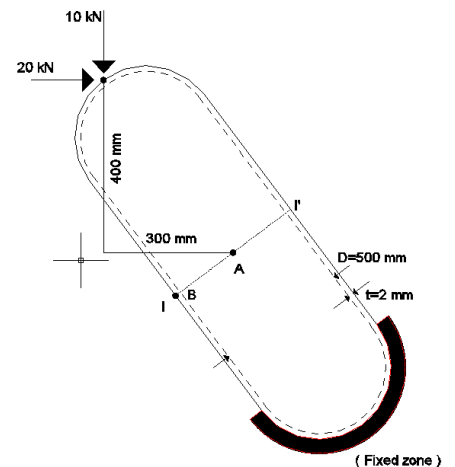
4) Determine the equation of the deflected curve and find maximum deflection using Integration Method.

5) Determine the maximum deflection using moment area method.
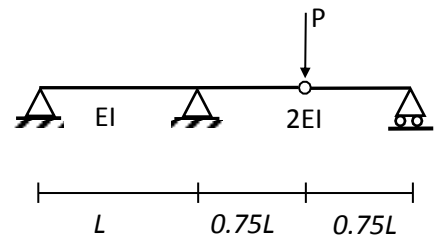
6) The beam carries uniformly distributed transverse load w and uniformly distributed axial load q. Determine the support reactions and maximum transverse displacement using moment area method.