

Assignment 5

- The objectives of this assignment are to give you the opportunity to refine your skills in determining values of principal stresses and in using Mohr's circle to help you see how to resolve applied stresses onto any mutually perpendicular axis.

Carefully review the figure given below and find the **principal stresses** at designated points. Draw all stress elements and indicate applied stresses using the sign convention that tension is positive to the right and shears are positive on positive faces of the stress patch. Compute the principal stresses for all patches and compute the maximum shear stress for each patch.

Draw the Mohr's circle for patch E; rotate the patch through an angle of 30° and report values of σ_n and τ_n .

