A bracket is loaded as shown below. The stress state at point A is known to be $\left(\sigma_x, \sigma_y, \tau\right) = \left(-10, 2, 8\right) ksi$.

a) Determine the n-t components of stress corresponding to $\theta = 36.87°$.

b) Draw the Mohr's circle for this state of stress. On your Mohr's circle, clearly indicate: the location of the circle's center, the radius of the circle and the location of the x-axis.

c) For this state of stress, what are the maximum and minimum values for normal stress, and what is the maximum value of in-plane shear stress?