

ID No.

Name:

Date:

Quiz FEM2

For the strains below, determine:

- 1) Major and minor principal strains and angle to principal axis
- 2) Maximum in-plane shear strain

Note: You can either solve this problem via calculations or by using Mohr's Circles. If using Mohr's Circles only, you only need to submit the Mohr's Circles (calculations are not required). However, your Mohr's Circle must be drawn to scale, and the answers to (1) and (2) must be clearly shown. Use Figure 1 to determine sign conventions for γ_{xy} .

$$\epsilon_{xx} = -180 \times 10^{-6}$$

$$\epsilon_{yy} = -260 \times 10^{-6}$$

$$\gamma_{xy} = +315 \times 10^{-6}$$

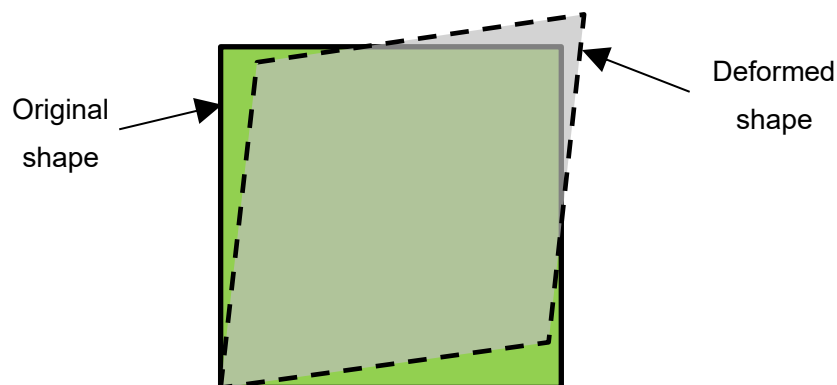


Figure 1. Undeformed and deformed shape of element