

## Question 3

**Q:** Why is maximum principal stress represented by contours, while principal stress is represented by vectors?

**A:** Principal stress consists of three orthogonal components: maximum, immediate, and minimum. For an easy view of each direction and magnitude, vectors are displayed at the center of gravity in each mesh by default. Maximum principal stress is one component of the principal stress and then has a scalar value suitable for contour diagrams. At nodes of a mesh, the principal stresses are calculated, while inside the mesh, the principal stresses are calculated by interpolation.