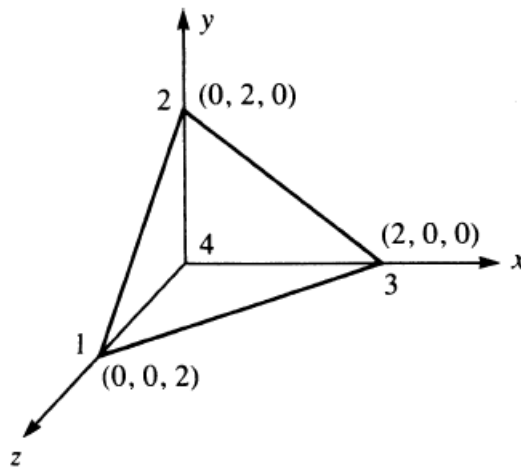


Please show your work and draw a box around your answer to receive full credit.

- 1) For the tetrahedron element shown in Figure 1, compute the stiffness matrix assuming that  $E = 30 \times 10^6$  psi and  $\nu = 0.3$ .
- 2) Find the nodal displacements for the tetrahedron shown in Figure 1 when a pressure of  $p_y = -100$  psi acts on face 123. Assume faces 124, 234, and 134 are on rollers.



**Figure 1.**