

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

- 1) Use MATLAB and write an M-file to evaluate the deformation for a mound of clay spinning on a potter's wheel at 20 rpm. A 1-element representation of the system is shown in Figure 1. Let  $E = 3 \times 10^3$  psi,  $\nu = 0.45$ , and  $\rho = 0.08$  lbf/in<sup>3</sup> for clay. For boundary conditions, assume radial displacements along the axis of symmetry ( $u_{1r}$  and  $u_{3r}$ ) and vertical displacements at the potter's wheel ( $u_{1z}$  and  $u_{2z}$ ) are zero.

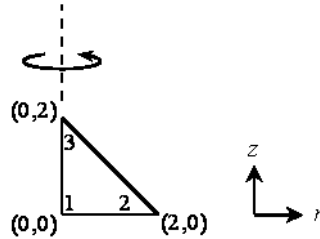


Figure 1.