1. A steel tube (outside diameter = 2.5 inches; inside diameter = 2.0 inches) supports a 300-lb force (acting in the \(-y\) direction) and a 1,100-lb force (acting in the \(+z\) direction). Determine the normal and shear stresses acting at point \(H\), located on the \(+z\) side of the tube as shown. Show your results on a stress element. (30 points)
2. Determine the vertical reaction forces at B, C, and D for the beam shown. Assume EI is constant for the entire beam. (30 points)