Thermal load problem:

Consider the truss below made from a material with $E=10\text{GPa}$ and $\alpha = 10^{-5} / ^\circ\text{C}$ with all members having cross-sectional areas of $2\text{cm}^2$. When the temperature of the vertical member ($E_3$) is increased by $200^\circ\text{C}$, calculate nodal displacements and member stresses for all 3 elements.