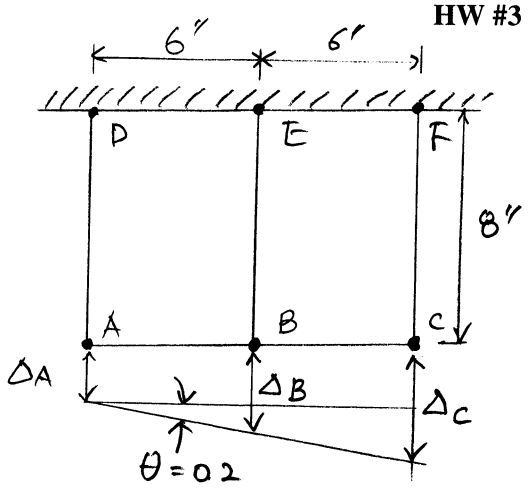
HW #3 Due: 9/19/2000

2-3



$\Delta_A = 0.002 \text{ (in)}$

$\Delta_B = 0.002 + 6 \cdot \tan(0.2)$

$= 0.02294 \text{ (in)}$

$\Delta_C = 0.002 + 12 \cdot \tan(0.2)$

$= 0.04389 \text{ (in)}$

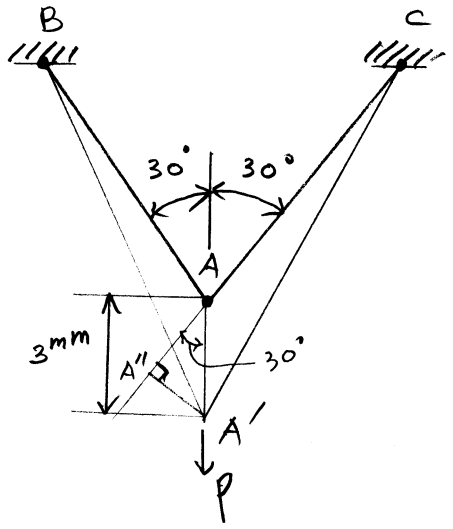
Average Normal Strain

$\varepsilon_{AD} = \frac{\Delta_A}{L_{AD}} = \frac{0.002}{8} = 0.25 \times 10^{-3}$

$\varepsilon_{BE} = \frac{\Delta_B}{L_{BE}} = \frac{0.02294}{8} = 2.87 \times 10^{-3}$

$\varepsilon_{CF} = \frac{\Delta_C}{L_{CF}} = \frac{0.04389}{8} = 5.49 \times 10^{-3}$

2-7



$\overline{AA'} = 3 \cdot \cos(30) = 2.60$

Average Normal Strain

$\varepsilon_{AB} = \varepsilon_{AC} = \frac{2.60}{400} = 6.5 \times 10^{-3}$

Symmetry