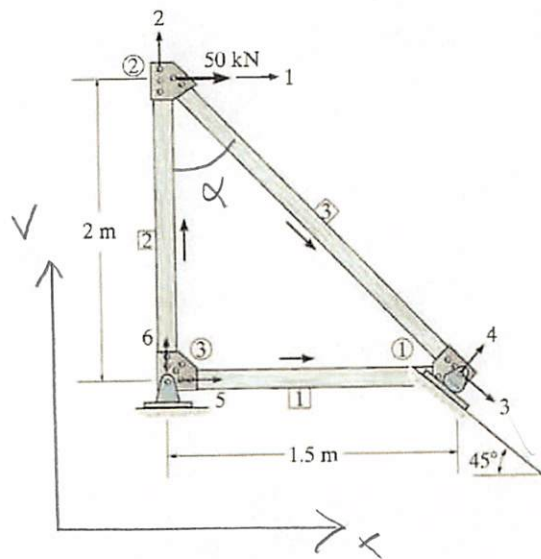
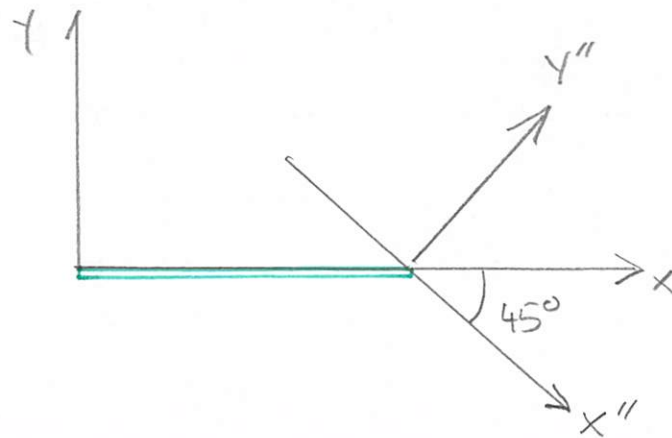


Problem 14b-2 – Determine the support reactions for the truss. Assume AE is constant.



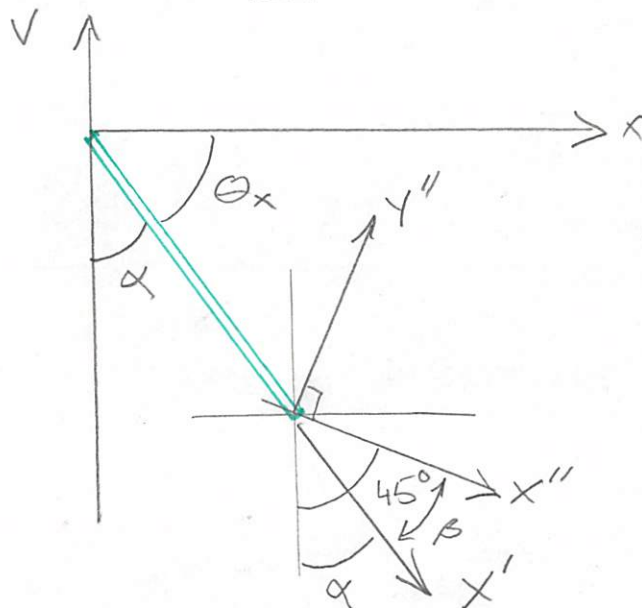
ELEMENT 1



$$\begin{cases} \Theta_x = 0 \\ \Theta_{x'} = 45^\circ \\ \Theta_{y'} = 45^\circ \end{cases}$$

ELEMENT 3

$$\alpha = \text{ATAN} \frac{1.5\text{m}}{2\text{m}} = 36.87^\circ$$

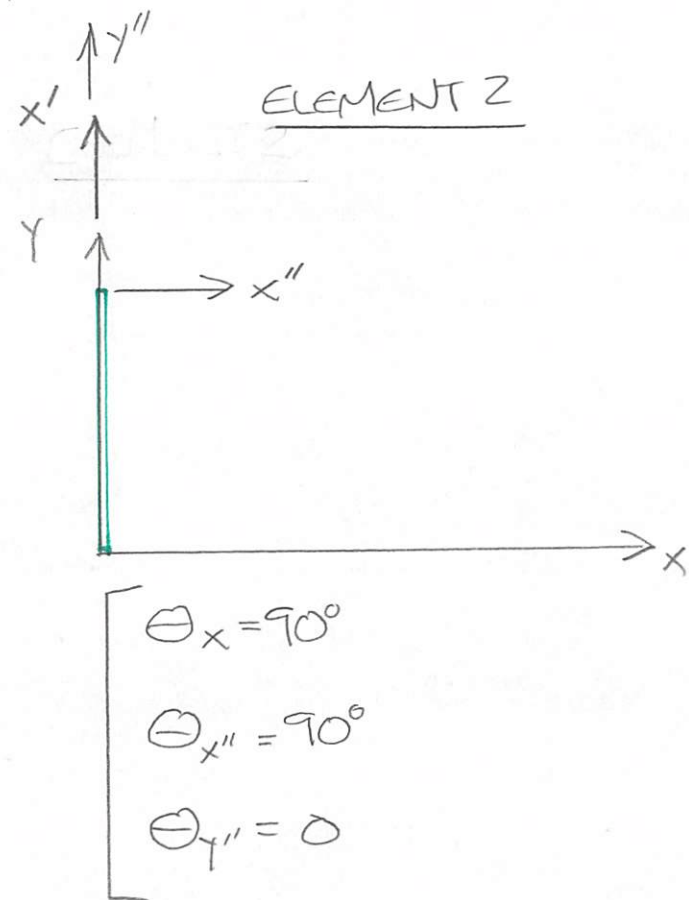


$$\beta = 45^\circ - \alpha = 8.13^\circ$$

$$\begin{aligned} \Theta_x &= 90^\circ - \alpha \\ &= 53.13^\circ \end{aligned}$$

$$\begin{cases} \Theta_{x'} = \beta = 8.13^\circ \\ \Theta_{y'} = 90.13^\circ \end{cases}$$

ELEMENT 2



$$\begin{cases} \Theta_x = 90^\circ \\ \Theta_{x'} = 90^\circ \\ \Theta_{y'} = 0 \end{cases}$$