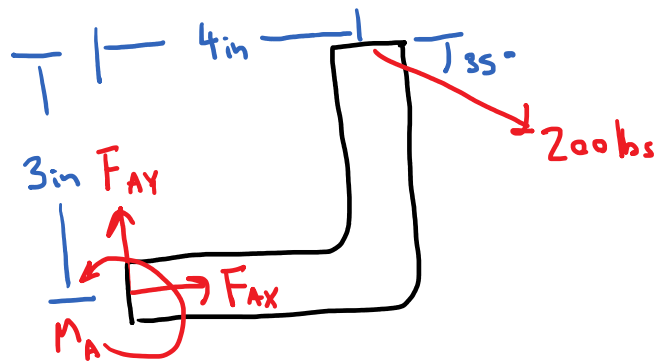
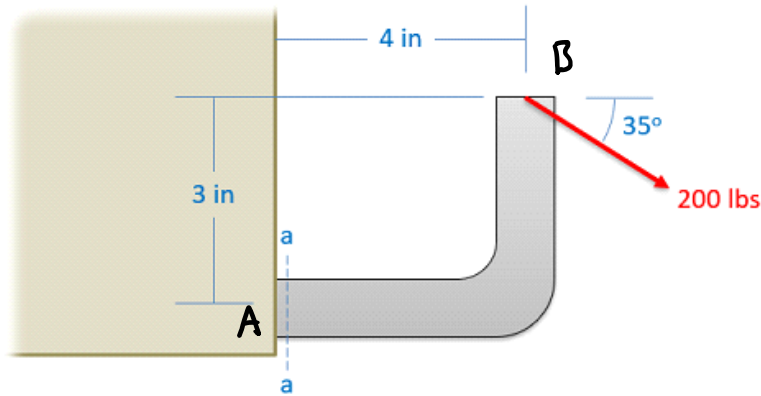


# Problem 1

A mounting bracket with the dimensions shown below is subjected to a 200 lb force. Determine all internal forces and moments at cross section a-a.



$$\sum F_x = F_{Ax} + 200 \cos(35) = 0$$

$$\sum F_y = F_{Ay} - 200 \sin(35) = 0$$

$$\sum M_A = M_A - 200 \cos(35)(3) - 200 \sin(35)(4) = 0$$

$$F_{Ax} = -200 \cos(35) = \underline{-163.8 \text{ lbs}}$$

$$F_{Ay} = 200 \sin(35) = \underline{114.7 \text{ lbs}}$$

$$M_A = 200 \cos(35)(3) + 200 \sin(35)(4) = \underline{950.35 \text{ in/lbs}}$$

Solution:

