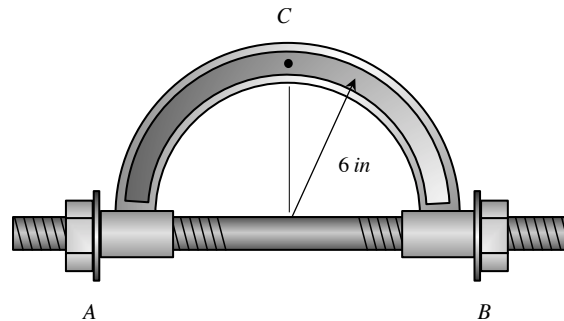
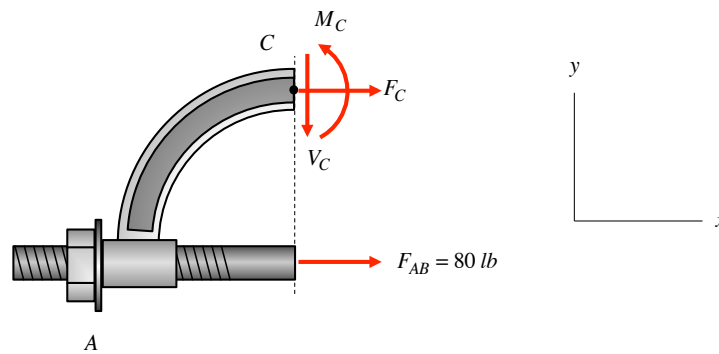


Example 1.7

The bolt shank is subjected to a tension of 80 lb. Determine the resultant internal loadings acting on the cross section at point C.



Solution



From FBD above:

$$\sum F_x = F_C + 80 = 0 \Rightarrow F_C = -80 \text{ lb}$$

$$\sum F_y = -V_C = 0 \Rightarrow V_C = 0$$

$$\sum M_C = M_C + 80(6) = 0 \Rightarrow M_C = -480 \text{ in}\cdot\text{lb}$$