1) Draw the shear and moment diagrams for the shaft and determine the shear and moment throughout the shaft as a function of $x$ for $0 < x < 3$ ft, $3$ ft $< x < 5$ ft, and $5$ ft $< x < 6$ ft. The bearings at A and B exert only vertical reactions on the shaft.
2) Draw the shear and moment diagrams from the beam, and determine the shear and moment throughout the beam as function of $x$ from $0 < x < 6\text{ft}$, and $6\text{ft} < x < 10\text{ft}$. 