1. Collar $A$ is connected to a 50-lb load and can slide on a smooth horizontal rod. Determine the magnitude of the force $P$ required to maintain the equilibrium of the collar when $x = 15$ in. Also determine the magnitude of the normal force between the collar and the rod when $x = 15$ in..
2. A container of weight $W = 1165 \text{ N}$ is supported by three cables. Determine the magnitude of the tension in each cable.
3. To keep a door closed, a wooden stick is wedged between the floor and the doorknob at
\( B \). The stick exerts at \( B \) a 175-N force directed along line \( AB \). Replace that force with an
equivalent resultant force and couple moment acting at \( C \).

\textit{Be sure to take note of all dimensions.}
4. Replace the distributed loadings by an equivalent resultant force and couple moment acting at point B.