1. A 100 lb cylinder is supported by a 20 lb bar. If all surfaces are smooth, determine the reactions at supports A and B of the bar.
2. A 26”x28” plate weights 200 lb and is supported in the horizontal position by a hinge and a cable. Determine the reactions at the hinge and the tension in the cable.
3. The truss carries the two loads shown. Determine the force in members $BC$, $BE$, and $CE$ and state if these members are in tension or compression. Assume that all joints are pinned. Let $P = 500 \text{ lb}$ and $d = 4 \text{ ft}$. 

![Truss Diagram]
4. Determine the reactions at fixed support \( A \) and pin \( B \). Also determine the normal force the pin at \( C \) exerts on the smooth slot. There is a small pulley at \( E \).