

**1-83**

From a free-body diagram of the upper half of the clamp, the equations of equilibrium give

$$\rightarrow \Sigma F_x = 0: \quad V = 0$$

$$\uparrow \Sigma F_y = 0: \quad 300 - P = 0$$

$$\curvearrowright \Sigma M_{cut} = 0: \quad M - 3(300) = 0$$

$$P = 300 \text{ lb (T)} \dots\dots\dots \text{Ans.}$$

$$V = 0 \text{ lb} \dots\dots\dots \text{Ans.}$$

$$M = 900 \text{ lb} \cdot \text{ft} \dots\dots\dots \text{Ans.}$$

