

**1-62**

From a free-body diagram of the wheel, the equations of equilibrium give

$$\circlearrowleft \Sigma M_B = 0: \quad 325F_{CD} - 150(2700) = 0$$

$$F_{CD} = 1246 \text{ N}$$

Since  $CD$  is a two-force member, the axial force on every cross section is the same

$$P = 1246 \text{ N (C)} \dots\dots\dots \text{Ans.}$$

and the shear force and the bending moment are both zero

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

$$M = 0 \text{ N} \cdot \text{m} \dots\dots\dots \text{Ans.}$$

