

Chapter 3:

3.13: $d = 0.5171 \text{ m}$

3.22 $(23.5 \text{ N} \cdot \text{m})\mathbf{i} + (78.5 \text{ N} \cdot \text{m})\mathbf{j} - (473 \text{ N} \cdot \text{m})\mathbf{k}$.

3.48 $M_x = -25.6 \text{ N} \cdot \text{m}; M_y = 10.80 \text{ N} \cdot \text{m};$
 $M_z = 40.6 \text{ N} \cdot \text{m}.$

3.58 $-2350 \text{ lb} \cdot \text{in}.$

3.77 $M = 604 \text{ lb} \cdot \text{in}.; \theta_x = 72.8^\circ, \theta_y = 27.3^\circ, \theta_z = 110.5^\circ.$

3.97 $\mathbf{F} = -(28.5 \text{ N})\mathbf{j} + (106.3 \text{ N})\mathbf{k};$
 $\mathbf{M} = (12.35 \text{ N} \cdot \text{m})\mathbf{i} - (19.15 \text{ N} \cdot \text{m})\mathbf{j} - (5.13 \text{ N} \cdot \text{m})\mathbf{k}.$

3.120 $\mathbf{R} = -(420 \text{ N})\mathbf{j} - (339 \text{ N})\mathbf{k};$
 $\mathbf{M} = (1.125 \text{ N} \cdot \text{m})\mathbf{i} + (163.9 \text{ N} \cdot \text{m})\mathbf{j} - (109.9 \text{ N} \cdot \text{m})\mathbf{k}.$