

CHAPTER 9

9.49 $\bar{I}_x = 260 \times 10^6 \text{ mm}^4$, $\bar{I}_y = 17.55 \times 10^6 \text{ mm}^4$;
 $\bar{k}_x = 144.6 \text{ mm}$, $\bar{k}_y = 37.6 \text{ mm}$.

9.50 $\bar{I}_x = 256 \times 10^6 \text{ mm}^4$, $\bar{I}_y = 100.0 \times 10^6 \text{ mm}^4$;
 $\bar{k}_x = 134.1 \text{ mm}$, $\bar{k}_y = 83.9 \text{ mm}$.

9.51 $\bar{I}_x = 250 \text{ in}^4$, $\bar{I}_y = 141.6 \text{ in}^4$;
 $\bar{k}_x = 4.10 \text{ in.}$, $\bar{k}_y = 3.08 \text{ in.}$

9.54 $\bar{I}_x = 633 \times 10^6 \text{ mm}^4$; $\bar{I}_y = 38.2 \times 10^6 \text{ mm}^4$.

9.115 (a) $7ma^2/18$. (b) $0.819ma^2$.

9.127 $837 \times 10^{-9} \text{ kg} \cdot \text{m}^2$; 6.92 mm.

9.128 $1.160 \times 10^{-6} \text{ lb} \cdot \text{ft} \cdot \text{s}^2$; 0.341 in.