

61. (a) Setting up equilibrium of torques leads to

$$F_{\text{far end}}L = (73 \text{ kg})(9.8 \text{ m/s}^2)\frac{L}{4} + (2700 \text{ N})\frac{L}{2}$$

which yields  $F_{\text{far end}} = 1.5 \times 10^3 \text{ N}$ .

- (b) Then, equilibrium of vertical forces provides

$$F_{\text{near end}} = (73)(9.8) + 2700 - F_{\text{far end}} = 1.9 \times 10^3 \text{ N} .$$