

2. The magnitude of the average force is

$$\left| \vec{F}_{\text{avg}} \right| = \frac{|\Delta \vec{p}|}{m} = \frac{m|\Delta \vec{v}|}{\Delta t} = \frac{(2300 \text{ kg})(15 \text{ m/s})}{0.56 \text{ s}} = 6.2 \times 10^4 \text{ N} .$$