72. (a) The magnitude of the force is

$$F = \frac{\Delta p}{\Delta t} = \frac{9.0 \times 10^3 \,\mathrm{kg \cdot m/s}}{12 \,\mathrm{s}} = 750 \,\mathrm{N} \ .$$

(b) Assuming this is one-dimensional motion (so that any acceleration implies a change in the magnitude of the velocity), we find the speed increase to be

$$\Delta v = \frac{\Delta p}{m} = \frac{9.0 \times 10^3 \,\mathrm{kg \cdot m/s}}{1500 \,\mathrm{kg}} = 6.0 \,\mathrm{m/s} \ .$$