

$$m = .050 \text{ kg}$$

$$F = 130 \text{ N}$$

$$t = .025 \text{ sec}$$

$$\begin{aligned} \text{a) } \Delta p &= F \cdot t \\ &= (130 \text{ N})(.025 \text{ sec}) \end{aligned}$$

$$\boxed{\Delta p = 3.25 \text{ Ns}}$$

$$\text{b) } \Delta p = m \cdot \Delta v$$

$$(3.25 \text{ Ns}) = (.05 \text{ kg}) \cdot \Delta v$$

$$\boxed{\Delta v = 65 \text{ m/s}}$$