

7-1)

Make 'to the right' be positive

$m = 0.16 \text{ kg}$ $v_i = 3 \text{ m/s to the right} \rightarrow v_i = +3 \text{ m/s}$

$F = 25 \text{ N to the right} \rightarrow F = +25 \text{ N}$

$\Delta t = 0.05 \text{ seconds}$

$$J = F \Delta t = \Delta p = mv_f - mv_i$$

So,

$$v_f = F\Delta t/m + v_i = 25*0.05/0.16 + 3 = 10.8 \text{ m/s}$$

Change F to -12N

$$v_f = F\Delta t/m + v_i = -12*0.05/0.16 + 3 = -0.75 \text{ m/s}$$