$$p \equiv mv \qquad\qquad J \equiv F\Delta t$$

$$\Sigma F = \frac{\Delta p}{\Delta t} \qquad\qquad \Sigma p = \Sigma p'$$

$$v_A + v'_A = v_B + v'_B \qquad\qquad x_{CM} = \frac{\Sigma m_i x_i}{\Sigma m_i}$$