


$P(\text{momentum}) = m(\text{mass}) \cdot v(\text{velocity})$
 $\text{kg} \cdot \text{m/s} = \text{kg} \cdot \text{m/s}$

Elastic Collision



Elastic Collision

bounce

inelastic collision

stick

$m_1 v_{1i} + m_2 v_{2i} = m_1 v_{1f} + m_2 v_{2f}$

$m_1 v_{1i} + m_2 v_{2i} = (m_1 + m_2) v_f$

Impulse-Momentum Theorem

$F \Delta t = p_f - p_i$

$F = \frac{\Delta p}{\Delta t}$

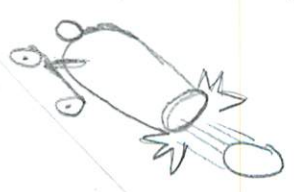
Force (N) · change in momentum (kg·m/s) / change in time (s)

Inelastic Collision



recoil

Explosion



Explosion

$(m_1 + m_2) v_i = m_1 v_{1f} + m_2 v_{2f}$

