

# Dynamics

## Momentum

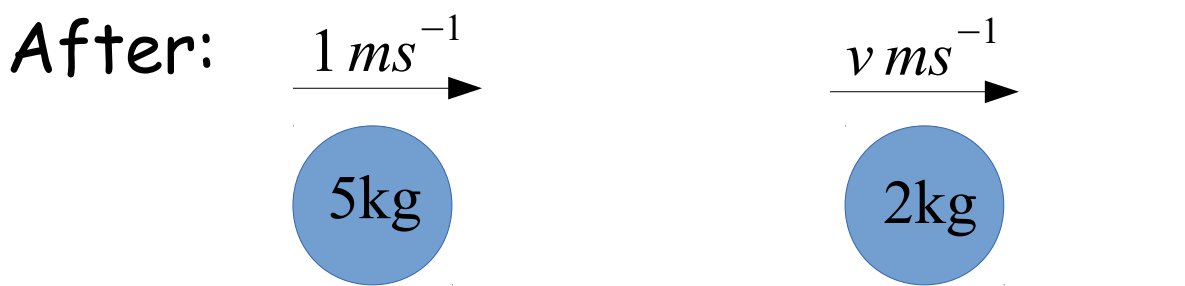
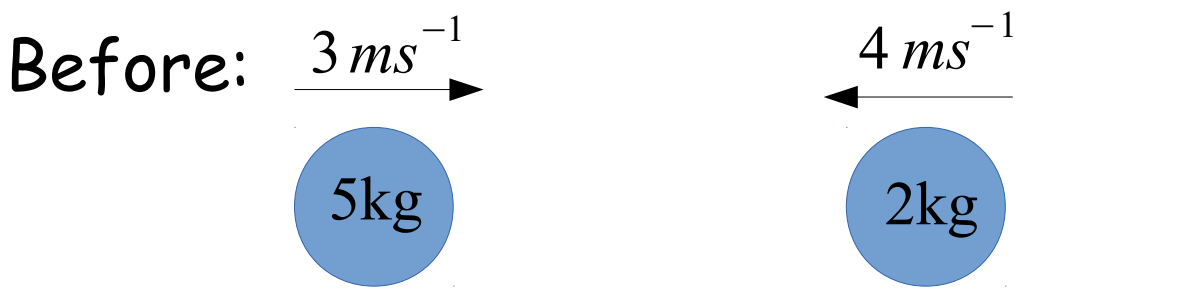
$$\text{Momentum} = mv$$

Impulse = change in momentum

$$I = mv - mu$$

## Conservation of Momentum

$$m_1 u_1 + m_2 u_2 = m_1 v_1 + m_2 v_2$$



$$m_1 u_1 + m_2 u_2 = m_1 v_1 + m_2 v_2$$

$$5(3) + 2(-4) = 5(1) + 2(v)$$

$$2 = 2(v)$$

$$v = 1 \text{ ms}^{-1}$$