

$$m_1 = m_2$$

$$v_1 = 5.0 \text{ m/s}$$

$$v_2 = 0 \text{ m/s}$$

$$v_1' = 4.33 \text{ m/s}$$

$$v_2' = 2.5 \text{ m/s}$$

$$KE_1 + KE_2 = KE_1' + KE_2'$$

$$\frac{1}{2} m_1 v_1^2 + \frac{1}{2} m_2 v_2^2 = \frac{1}{2} m_1 v_1'^2 + \frac{1}{2} m_2 v_2'^2$$

$$(5.0 \text{ m/s})^2 + (0 \text{ m/s})^2 = (4.33 \text{ m/s})^2 + (2.5 \text{ m/s})^2$$

$$25 = 25$$

KE is conserved, so the collision is ...

Elastic