

$$v(\text{big}) = 1.09\text{ms}^{-1}$$

$$p(\text{big}) = 0.227 \text{ kg ms}^{-1}$$

$$v_1(\text{small}) = 0.552\text{ms}^{-1}$$

$$v_2(\text{small}) = 1.48 \text{ ms}^{-1}$$

$$p_1(\text{small}) = 0.0554 \text{ kg ms}^{-1}$$

$$p_2(\text{small}) = 1.48 \text{ kg ms}^{-1}$$

$$p_1 + p_2 = p_1 + p_2$$

$$m_1u_1 + m_2u_2 = m_1v_1 + m_2v_2$$

$$0.227 + 0 = 0.0554 + 1.48$$

$$0.227 \approx 0.204$$