

Q65

運動量保存の法則より,

$$m_A u_A + m_B u_B = m_A u_A' + m_B u_B'$$

$$2.5 \times 10^3 \times 200 = 0.5 \times 10^3 \cdot 250 + 2.0 \times 10^3 \cdot u_B'$$

$$2 u_B' = 500 - 125$$

$$= 375$$

$$\therefore u_B' = 187.5 \text{ m/s}$$

$$\approx 188 \text{ m/s}$$

