

According to the momentum conservation law

$$P = m_1V_1 - m_2V_2 = m_2V_4 - m_1V_3 = 6 * 10 - 4 * 5 = 40 \frac{\text{kg m}}{\text{s}}$$

According to the energy conservation law

$$K = \frac{m_1V_1^2}{2} + \frac{m_2V_2^2}{2} = \frac{m_1V_3^2}{2} + \frac{m_2V_4^2}{2} = 6 * \frac{10^2}{2} + 4 * \frac{5^2}{2} = 350 J$$

Hence

$$V_4 = 13 \frac{m}{s}$$