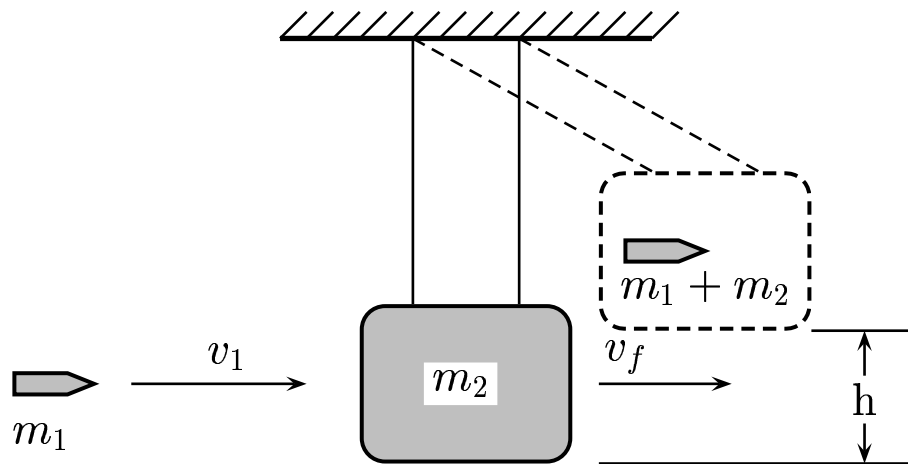


Consider the set up of a ballistic pendulum.



If the initial velocity of the bullet of mass m_1 is v_1 , find the final momentum immediately after the collision.

- A) $p_f = m_1 v_1$.
- B) $p_f = m_2 v_1$.
- C) $p_f = (m_1 + m_2) v_1$.
- D) $p_f = m_1 v_f$.

Momentum is conserved during a collision process.

$$p_f = p_i$$
$$p_f = m_1 v_1$$

Answer **A**.