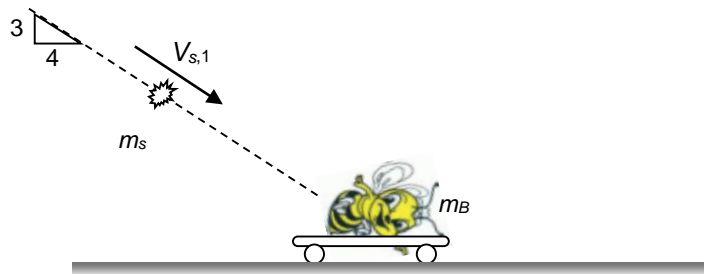

Example

A spitball with mass m_s is initially traveling at a velocity of $V_{s,1}$ at the angle shown in the figure. The spitball strikes a bee riding a skateboard with a combined mass of m_B . The bee and board are initially at rest on the smooth, frictionless surface.

- Assuming the spitball sticks to the bee, determine the final velocity of the bee/board/spitball combination.
- Find the horizontal component of the **impulse** on the bee.
- If the impact takes 0.20 seconds, find the horizontal component of the **average impulsive force** on the bee.



Example

A man standing in the back of a boat initially at rest starts walking to the front of the boat with a constant velocity relative to the boat of $V_{m/b}$. By the time he reaches the front of the boat he finds, much to his surprise, that the boat has moved away from the dock. Find the distance the boat has traveled from the dock. The masses of the man and boat are m_m and m_b , respectively.

