Consider the deflection of a ball by a 45° incline. The ball bounces off horizontally. Assume that it is an elastic collision.

Determine the impulse vector delivered by the incline to the ball.

A) direction $\uparrow$ and $\Delta p = p_i$.
B) direction $\downarrow$ and $\Delta p = p_i$.
C) direction $\uparrow$ and $\Delta p = \sqrt{2} p_i$.
D) direction $\downarrow$ and $\Delta p = \sqrt{2} p_i$.

From the sketch, one sees the answer.
Answer C.