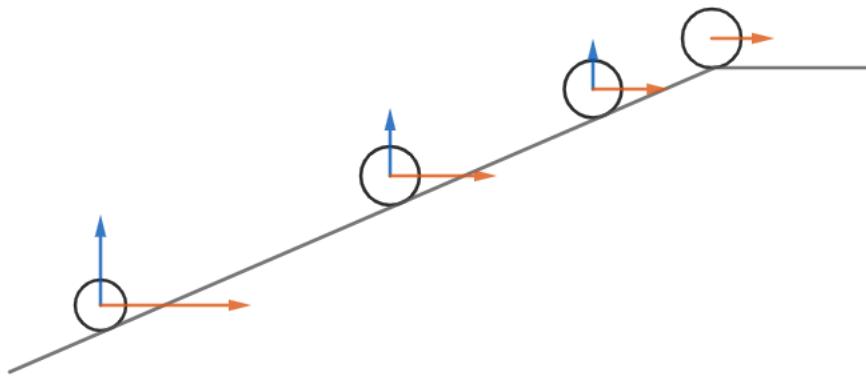


2023 F=ma Exam: Problem 3

Kevin S. Huang



Since the vertical distance between the ball's collision point and subsequent peak height is decreasing, the vertical velocity v_y gets smaller at each collision. Between the collisions, the vertical velocity decreases linearly by gravity,

$$v_y(t) = v_{y0} - gt$$

At the end, we have $v_y = 0$. Thus, the answer is E.