



A big box of mass M is resting on a horizontal smooth floor. On the bottom of the box, there is a small block of mass m . The block is given an initial speed v_0 relative to the floor, and starts to bounce back and forth between the two walls of the box. What is the final speed of the box when the block has finally come to rest in the box?

A 0

B v_0

C $\frac{M}{M+m} v_0$

D $\frac{m}{M+m} v_0$