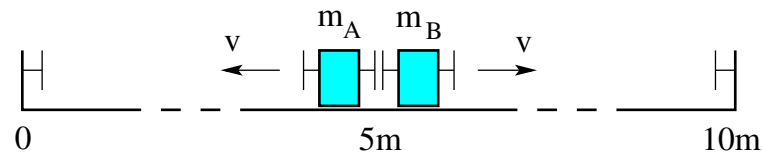


[mex247] Let's meet again... and again

Two blocks of masses m_A and m_B , positioned in the middle (at $x_0 = 5m$) of a horizontal air track, are launched with equal speed v in opposite directions. They bounce off the ends of the track and off each in a succession of elastic collisions. The track does not recoil significantly and the blocks are of very small size compared to the length of the track. Find the locations x_1 and x_2 on the track where the two blocks collide the first and second times, respectively, if (i) $m_A = 2\text{kg}$, $m_B = 4\text{kg}$ and (ii) $m_A = 2\text{kg}$, $m_B = 3\text{kg}$.



Solution: