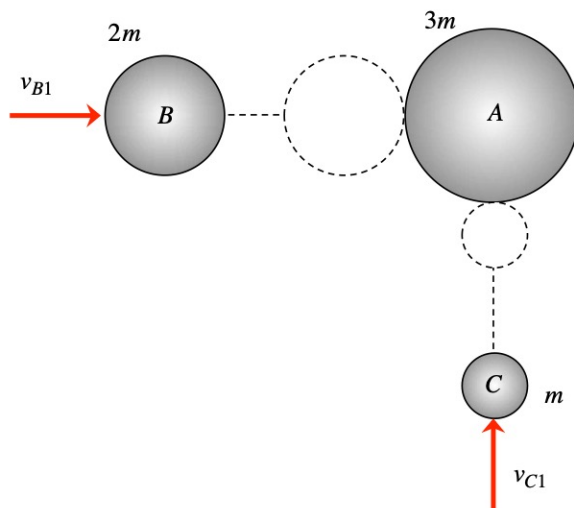


**Homework H.4.O**

**Given:** Spheres A, B and C (having masses of  $3m$ ,  $2m$  and  $m$ , respectively, are able to slide on a smooth horizontal surface. Spheres B and C moving with speeds of  $v_{B1}$  and  $v_{C1}$ , respectively, strike the stationary sphere A at exactly the same time. The coefficient of restitution is  $e$  for all impacts.

**Find:** Determine the direction of travel for A after the impact.



Use the following parameters in your analysis:  $m = 2$  kg,  $v_{B1} = 10$  m/s,  $v_{C1} = 4$  m/s and  $e = 0.6$ .