

- 3 Three uniform small spheres A , B and C have equal radii and masses $3m$, m and m respectively. The spheres are at rest in a straight line on a smooth horizontal surface, with B between A and C . The coefficient of restitution between each pair of spheres is e . Sphere A is projected directly towards B with speed u .

- (i) Find, in terms of u and e , expressions for the speeds of A , B and C after the first two collisions. [6]

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