

Small smooth spheres A and B , of equal radii and of masses 5 kg and 3 kg respectively, lie on a smooth horizontal plane. Initially B is at rest and A is moving towards B with speed 8.5 m s^{-1} . The spheres collide and after the collision A continues to move in the same direction but with a quarter of the speed of B .

- (a) Find the speed of B after the collision. [3]

[illegible]

- (b)** Find the loss of kinetic energy of the system due to the collision. [2]

This image shows a blank sheet of white paper with ten horizontal dashed lines. The lines are evenly spaced and extend across the width of the page, providing a guide for handwriting practice. There is no text or other markings on the paper.