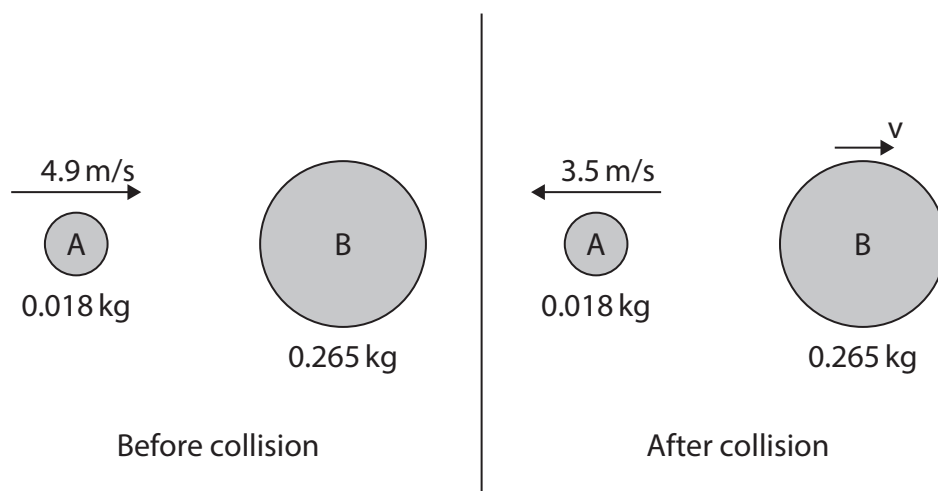


- 5 The diagram shows the collision between two balls, A and B.

The masses and velocities of both balls are shown before and after the collision.

Ball B is stationary before the collision.



- (a) When the balls collide, ball B applies a force on ball A, which causes the velocity of ball A to change.

Ball A also applies a force on ball B during the collision.

Describe how the force applied on ball A compares with the force applied on ball B during the collision.

(2)

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- (b) Calculate the momentum of ball A before the collision.

(2)

momentum of ball A before collision = kg m/s



(c) Show that the velocity, v , of ball B after the collision is about 0.6 m/s .

(4)

(d) A collision is considered elastic if the total kinetic energy before the collision is equal to the total kinetic energy after the collision.

Using data from the diagram, deduce whether this collision is elastic.

(4)

(Total for Question 5 = 12 marks)

