

# Solutionbank M1

Heinemann Modular Maths for Edexcel AS and A-level

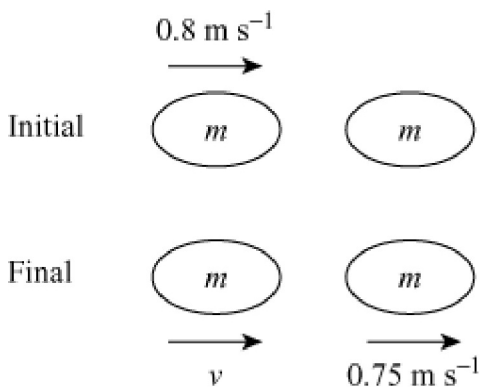
## 8 Momentum

### Exercise A, Question 8

#### Question:

A red snooker ball that was at rest is hit directly by a white ball moving at  $0.8 \text{ m s}^{-1}$ . After the collision the red ball moves at  $0.75 \text{ m s}^{-1}$ . Assume that all the motion takes place on a straight line. Find the speed of the white ball after the collision.

#### Solution:



Using conservation of momentum

$$0.8m = mv + 0.75m$$

$$0.05m = mv$$

$$v = 0.05$$

$\therefore$  Speed is  $0.05 \text{ m s}^{-1}$ .