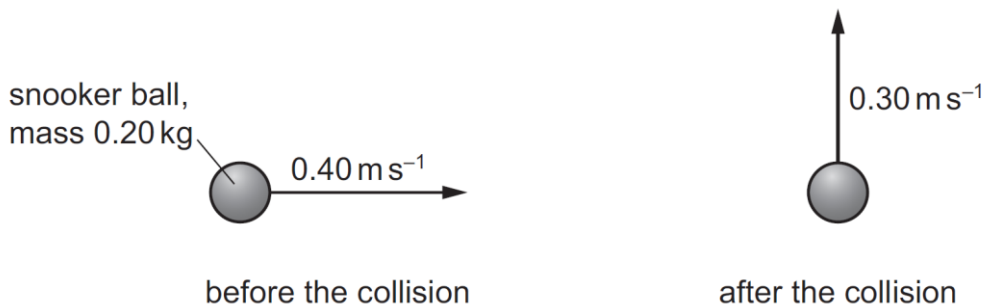


- 5 A snooker ball of mass  $0.20\text{ kg}$  has a collision so that its direction of movement changes by an angle of  $90^\circ$ , as shown.



The ball has a speed of  $0.40\text{ m s}^{-1}$  before the collision and a speed of  $0.30\text{ m s}^{-1}$  after the collision.

What is the **magnitude** of the change in momentum of the snooker ball?

- A  $0.020\text{ kg m s}^{-1}$
  - B  $0.10\text{ kg m s}^{-1}$
  - C  $0.14\text{ kg m s}^{-1}$
  - D  $0.50\text{ kg m s}^{-1}$
- 6 A camera drone of mass  $1.20\text{ kg}$  hovers at a fixed point above the ground. The drone has four