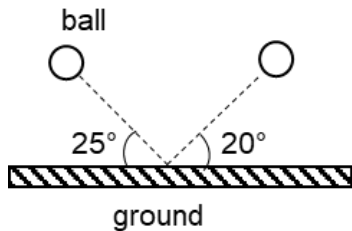


- 5 A ball of mass  $140\text{ g}$  is moving towards the ground at an angle of  $25^\circ$ . It hits the ground at  $20\text{ m s}^{-1}$  and bounces off with a speed of  $15\text{ m s}^{-1}$  at an angle of  $20^\circ$ .



What is the magnitude of the impulse exerted on the ball?

- A**  $1.9\text{ N s}$       **B**  $2.0\text{ N s}$       **C**  $4.9\text{ N s}$       **D**  $32\text{ N s}$