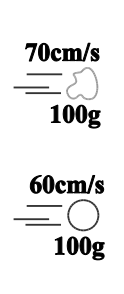


1. A 100-g lump of clay hits a wall at 70 cm/s and sticks. A 100-g rubber ball hits the same wall at 60 cm/s and rebounds with a speed of 30 cm/s. Which object experiences the larger impulse delivered by the wall during the collision? Explain



2. A 0.12-kg ball is moving at 6 m/s when it is hit by a bat, causing it to reverse direction and have a speed of 14 m/s. What is the change in the magnitude of the momentum of the ball?
3. A crane drops a 0.30 kg steel ball onto a steel plate. The ball's speeds just before impact and after are 4.5 m/s and 4.2 m/s, respectively. If the ball is in contact with the plate for 0.030 s, what is the magnitude of the average force that the ball exerts on the plate during impact?

