

- 6** A steel ball of mass  $m$  is dropped vertically onto a steel table. The ball is in contact with the table for a very short duration and it rebounds with very little loss in kinetic energy.

Which one of the following statements concerning the average force  $F$  exerted on the ball by the table during the collision is correct?

- A**  $F$  is smaller than  $mg$ .
- B**  $F$  is greater than  $mg$ .
- C**  $F$  is greater than the force that the ball exerted on the table during the collision.
- D**  $F$  is smaller than the force that the ball exerted on the table during the collision.