

**9** A ball falls vertically and bounces on the ground.

The following statements are about the forces acting while the ball is in contact with the ground.

Which statement is correct?

- A** The force that the ball exerts on the ground is always equal to the weight of the ball.
- B** The force that the ball exerts on the ground is always equal in magnitude and opposite in direction to the force the ground exerts on the ball.
- C** The force that the ball exerts on the ground is always less than the weight of the ball.
- D** The weight of the ball is always equal in magnitude and opposite in direction to the force that the ground exerts on the ball.

**10** Two spheres approach each other along the same straight line. Their speeds are  $v_1$  and  $v_2$ .