

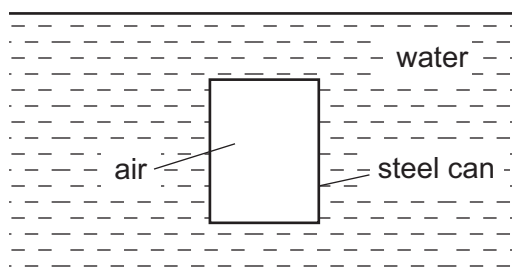
- 11 A golf ball of mass  $m$  is dropped onto a hard surface from a height  $h_1$  and rebounds to a height  $h_2$ .

The momentum of the golf ball just as it reaches the surface is different from its momentum just as it leaves the surface.

What is the total change in the momentum of the golf ball between these two instants? (Ignore air resistance.)

- A  $m\sqrt{2gh_1} - m\sqrt{2gh_2}$
- B  $m\sqrt{2gh_1} + m\sqrt{2gh_2}$
- C  $m\sqrt{2g(h_1 - h_2)}$
- D  $m\sqrt{2g(h_1 + h_2)}$

- 12 A sealed cylindrical steel can is situated below the surface of water.



What is the origin of the upthrust that acts on the can?

- A The air pressure in the can is less than the water pressure outside the can.
- B The average density of the air and steel is less than the density of water.
- C The water pressure on the bottom of the can is greater than the water pressure on the top.
- D The weight of displaced water acts upwards on the can.

**Space for working**