8 A ball of mass m travels vertically downwards and then hits a horizontal floor at speed u.

It rebounds vertically upwards with speed v.

The collision lasts a time Δt.

What is the average resultant force exerted on the ball during the collision?

A $\frac{mv - mu}{\Delta t}$ downwards

B $\frac{mv - mu}{\Delta t}$ upwards

C $\frac{mv + mu}{\Delta t}$ downwards

D $\frac{mv + mu}{\Delta t}$ upwards