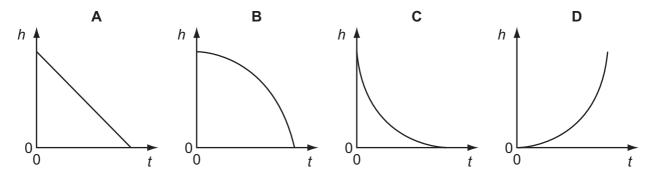12 Two equal masses travel towards each other on a frictionless air track at speeds of $60\,\text{cm}\,\text{s}^{-1}$ and $40\,\text{cm}\,\text{s}^{-1}$. They stick together on impact.

What is the speed of the masses after impact?

A $10\,\text{cm}\,\text{s}^{-1}$ **B** $20\,\text{cm}\,\text{s}^{-1}$ **C** $40\,\text{cm}\,\text{s}^{-1}$ **D** $50\,\text{cm}\,\text{s}^{-1}$

13 A small steel ball falls freely under gravity after being released from rest.

Which graph best represents the variation of the height h of the ball with time t?

Space for working