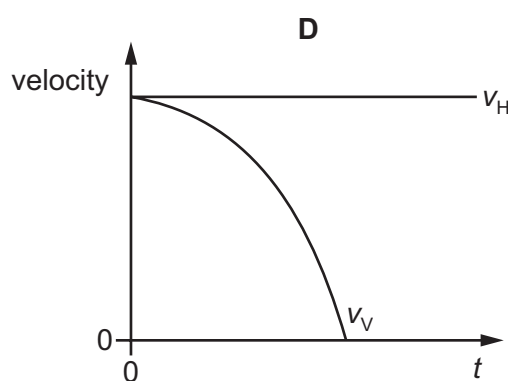
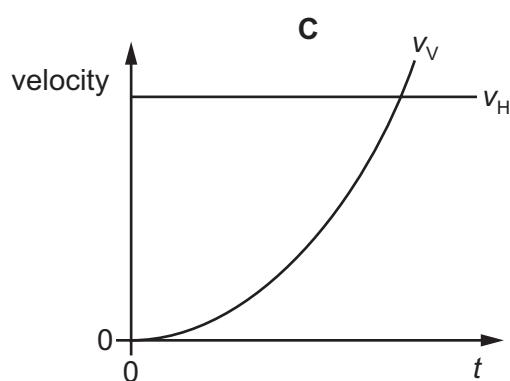
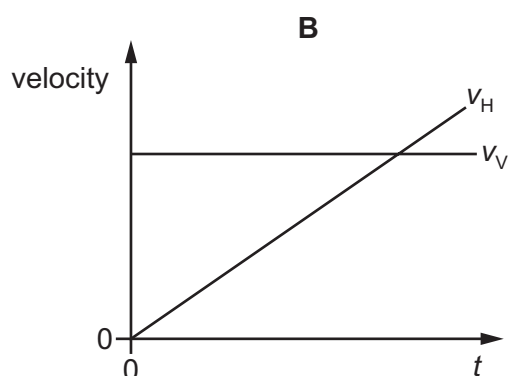
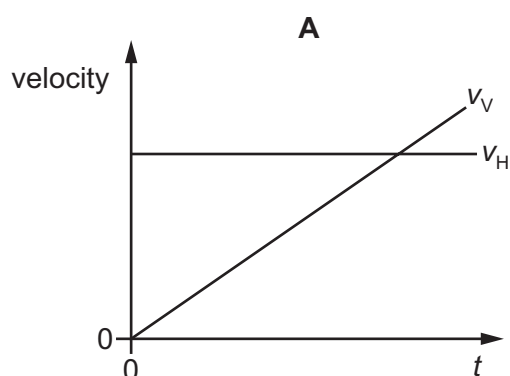


- 5 A stone is projected horizontally at time $t = 0$ and falls. Air resistance is negligible. The stone has a horizontal component of velocity v_H and a vertical component of velocity v_V .

Which graph shows how v_H and v_V vary with time t ?



- 6 On the Earth, an object takes time T_E to fall from rest through a vertical distance h .
On the Moon, the same object takes time T_M to fall from rest through the same vertical distance h .

The ratio $\frac{\text{acceleration of free fall on the Earth}}{\text{acceleration of free fall on the Moon}}$ is equal to 6.

Air resistance is negligible for the object on the Earth and on the Moon.

What is the ratio $\frac{T_E}{T_M}$?

- A** $\frac{1}{6}$ **B** $\frac{1}{\sqrt{6}}$ **C** $\sqrt{6}$ **D** 6