

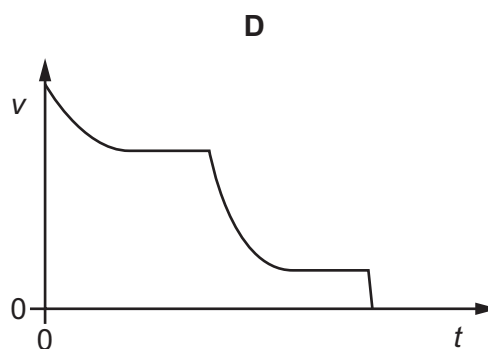
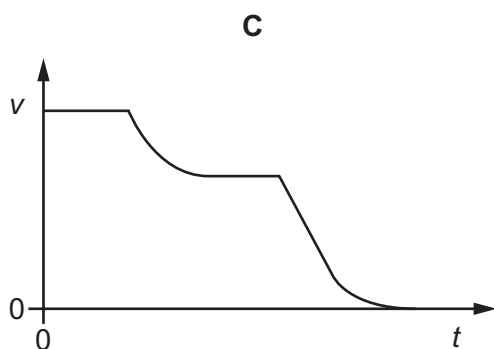
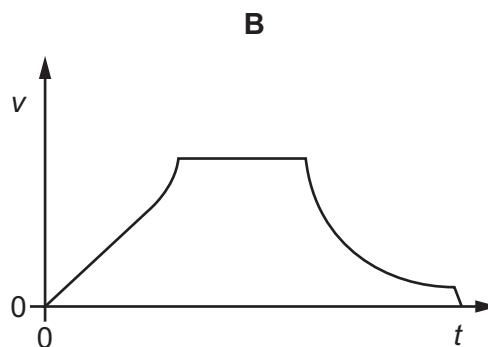
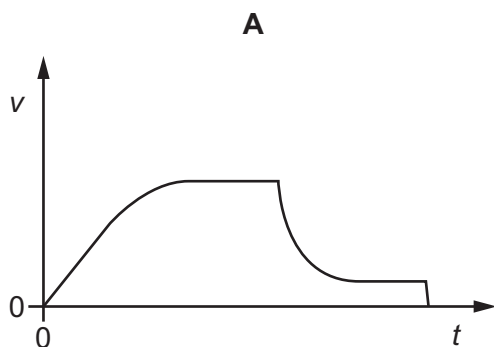
- 8 A mass is placed on a frictionless slope inclined at 30° to the horizontal. The mass is then released.

What is its acceleration down the slope?

- A 4.9 ms^{-2} B 5.7 ms^{-2} C 8.5 ms^{-2} D 9.8 ms^{-2}

- 9 A parachutist falls vertically from rest at time $t = 0$ from a hot-air balloon. She falls for some distance before opening her parachute.

Which graph best shows the variation with time t of the speed v of the parachutist?



- 10 A ship of mass $8.4 \times 10^7 \text{ kg}$ is approaching a harbour with speed 16.4 ms^{-1} . By using reverse thrust it can maintain a constant total stopping force of $920\,000 \text{ N}$.

How long will it take to stop?

- A 15 seconds
B 150 seconds
C 25 minutes
D 250 minutes