

Kinematics – AS Mathematics P11. [June/2022/Paper_7356/01/No.11](#)

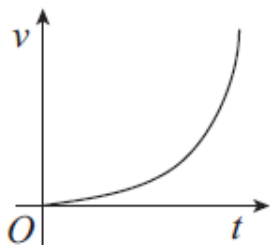
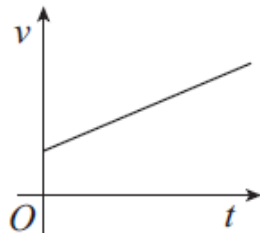
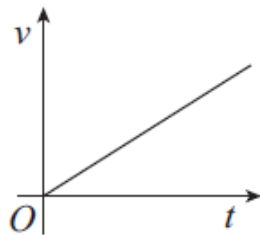
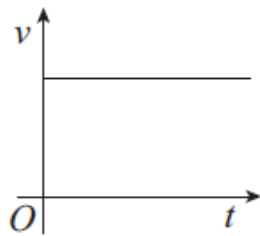
A car, initially at rest, moves with constant acceleration along a straight horizontal road.

One of the graphs below shows how the car's velocity, $v \text{ m s}^{-1}$, changes over time, t seconds.

Identify the correct graph.

Tick (✓) **one** box.

[1 mark]



2. *June/2022/Paper_7356/01/No.14*

A ball is released from rest from a height h metres above horizontal ground and falls freely downwards.

When the ball reaches the ground, its speed is $v \text{ m s}^{-1}$, where $v \leq 10$

Show that

$$h \leq \frac{50}{g}$$

[3 marks]
