| AQA P5b Forces and motion Combined Higher	Required Practical for this topic: None

Speed and acceleration	Speed unit	Metres per second (m/s)
	Velocity	The vector form of speed. Speed in a given direction
	Acceleration	The rate of change of velocity
	Deceleration	A negative acceleration. Slowing down.
	Acceleration unit	Metres per second per second or metres per second squared (m/s/s or m/s^2)
	For questions with two speeds	Use u for initial speed and v for final speed
	Distance = speed × time (s = v × t)	
	Acceleration = change in velocity ÷ time (a = Δv ÷ t or a = (v - u) ÷ t)	

Terminal velocity	Terminal velocity	The maximum speed of a falling object
	When an object accelerates	The force of air resistance increases
	Terminal velocity is achieved when	The forces of weight and air resistance balance
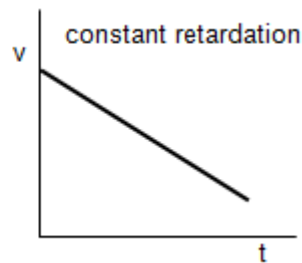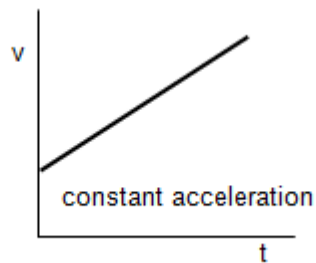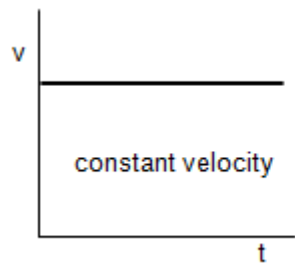
Motion graphs	Distance time graph for a stationary object	Horizontal line
	Distance-time graph for an object at a steady speed	Straight line sloping upwards
	Distance-time graph gradient	Equals the speed
	Velocity-time graph for an object at a steady speed	Horizontal line
	Velocity-time graph for an accelerating object	Straight line sloping upwards
	Velocity-time graph for a decelerating object	Straight line sloping downwards
	Velocity-time graph gradient	Equals the acceleration
	The area underneath a velocity-time graph	Equals the distance travelled
	The gradient of the tangent to a distance-time graph	Equals the instantaneous speed

constant velocity

constant acceleration

constant retardation