

P2 REVISION - CHAPTER 1 - Motion

Distance-time Graphs

The gradient of the line on a distance-time graph represents _____.
The _____ the gradient, the greater the speed.

If an object is stationary, the line on a distance-time graph is _____.

If an object is moving at a constant speed, the line on a distance-time graph is a straight line that slopes _____.

$$\text{Speed in metres per second, m/s} = \frac{\text{distance travelled in metres, m}}{\text{time taken in seconds, s}}$$

Velocity & Acceleration

The **VELOCITY** of an object is its speed in a given direction.

If the velocity of an object changes, the object _____.

The acceleration equation is:

$$a = \frac{v-u}{t}$$

a is the acceleration in metres per second squared, m/s^2

v is the final velocity in metres per second, m/s

u is the initial velocity in metres per second, m/s .

t is the time taken for the change in seconds, s.

If the value calculated for acceleration is negative, the body is decelerating – slowing down. A deceleration is the same as a negative acceleration.

Velocity-time graphs

The gradient of the line on a velocity-time graph represents _____.

The steeper the _____, the greater the acceleration.
What does a horizontal line show on a velocity-time graph?

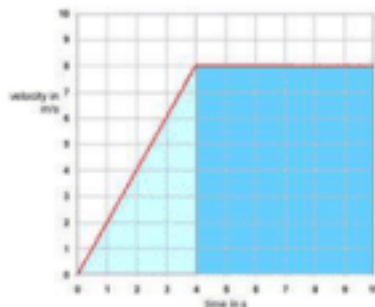
What area on a velocity-time graph shows the distance?

Using Graphs



Calculate the gradient of the line on a distance-time graph to give you the speed of an object.

Calculate the gradient of the line on a velocity-time graph to give you the acceleration of an object.



KEY WORDS:
Velocity
Acceleration
Deceleration
Speed

ASSESSMENT:

