Distance travelled under constant Velocity

Note that *velocity* is often also termed *speed*. However the term velocity implies a direction whereas the term speed does not.

If an object travels with a constant velocity of u metres per second (m/s or ms^{-1}) the in 1 second it travels u metres, in 2s it travels $2u$ metres, etc.

In general an object travelling with a velocity u for a time t travels a distance $s = ut$.

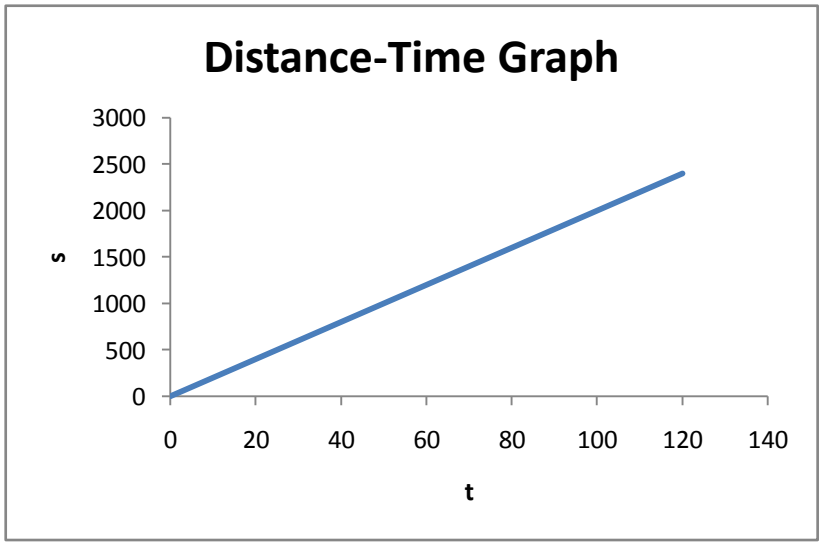
Example

A car travels at a constant velocity of 20 ms^{-2}, how far will it travel in 2 minutes?

2 minutes = 120 seconds.
Distance $s = ut = 20 \times 120 = 2400$m

If we plot a graph of the distance versus time, the velocity is equal to the gradient of the line.

For the example the distance-time graph would be as follows.



Note the gradient of the line is 20, the velocity.