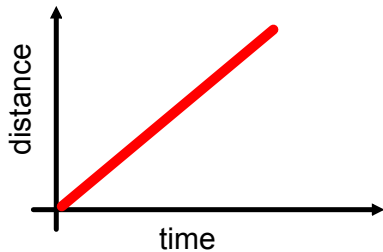


## Distance Time Graphs



Traditionally, time is on the x-axis and distance is on the y-axis.

A straight line on a distance time graph represents moving at a constant speed.

The steeper the gradient, the higher the speed. If the line is horizontal the object is stationary.

"Distance" is short for "distance travelled". It's impossible to ever decrease the distance you have travelled, so a dist-time graph can never slope downwards.

The gradient tells you the speed at a particular point in the motion. To work out the average speed, we do:

$$\text{average speed} = \frac{\text{total distance}}{\text{total time}}$$

$m/s$ 
 $m$ 
 $s$

## Displacement Time Graphs

These are similar to distance-time graphs, but there are a few important differences.

Note: at GCSE we will only be dealing with motion in a straight line.

"Displacement" means distance from a point. It also tells you the direction, usually with a + or -. The sign (+ or -) can mean left or right or in front or behind.

Unlike distance, displacement can increase and decrease.

