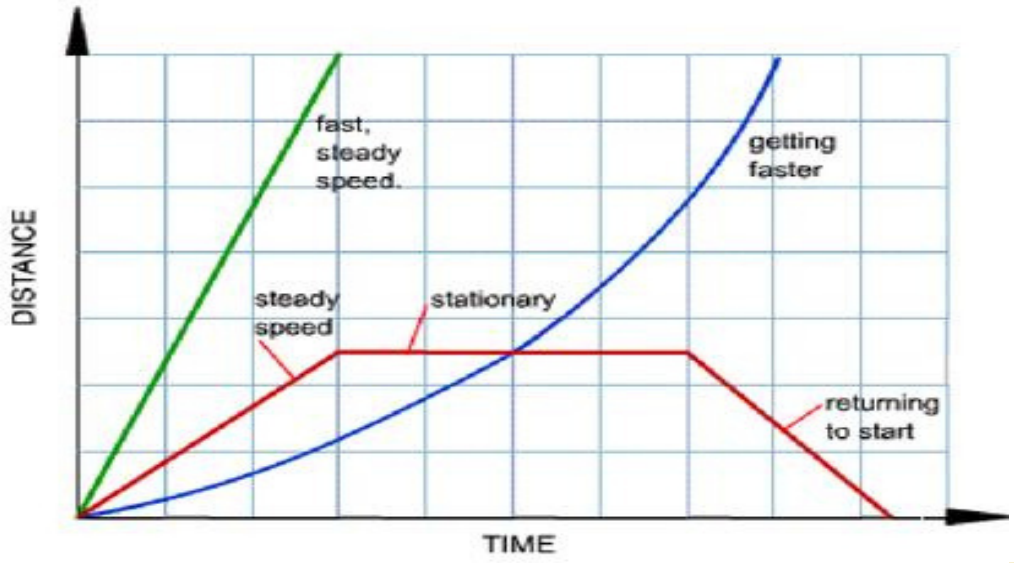
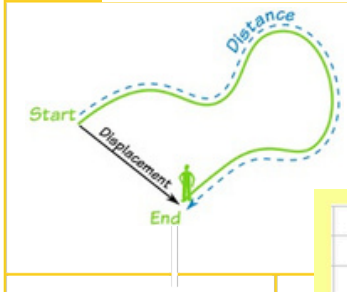
1	A **scalar** quantity has only a **magnitude**but a **vector**quantity has both a **magnitude**and a **direction**.
2	Anexample of a scalar quantity is **speed**and an example of a vector quantity is **velocity**(which is speed in a givendirection).
3	The standardunit for **time**is seconds **(s)**
4	The standard unit for **distance**is metres **(m)**
5	Speed = distance ÷time
6	The standard units for both **speed**and**velocity**are **m/s**
7	A typical walking speed is 1.5 m/s
8	A typical running speed is 3 m/s
9	A typical cycling speed is 6 m/s
10	On a **distance–time** graph, a **flat line** tells you that the object is not moving (**stationary**). A steeped, straight line tells you that the object is travelling a constant or steady speed.
11	To calculate the **speed**or velocity from a **distance–time graph** you need to calculate the **gradient**of the line.
12	Acceleration is the rate of change of velocity andthe standard unit for acceleration is m/s2
13	Acceleration = (final velocity–initial velocity) ÷time taken Accelerationcan also be calculated using the equation
14	Final velocity squared –initial velocity squared= 2 x acceleration x distance V2–U2= 2ax
15	A flat,straight line on a velocity –time graph tells you that the object is travelling at a constant or steady speed. A steeped, straight line tells you that the object is accelerating.
16	To calculate the distance travelled from a velocity–time graph you need to calculate the area under the graph.





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

V2–U2= 2ax