Average vs. instantaneous rate of change

Example 1

Below are two versions of the same distance-time graph

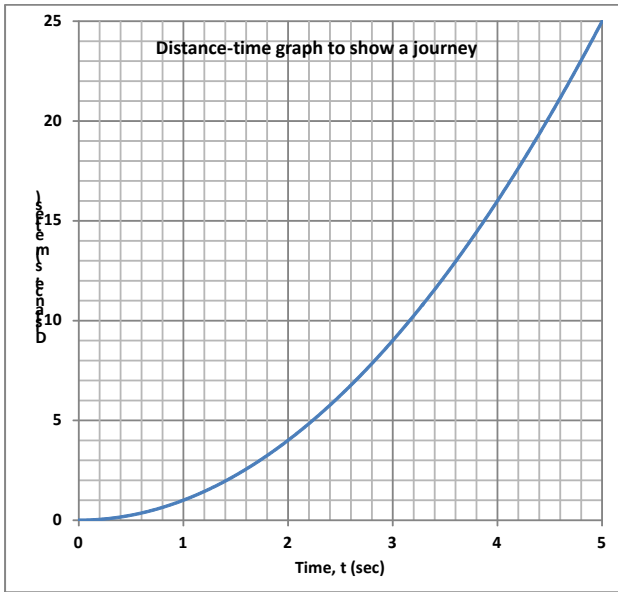
Average rate of change

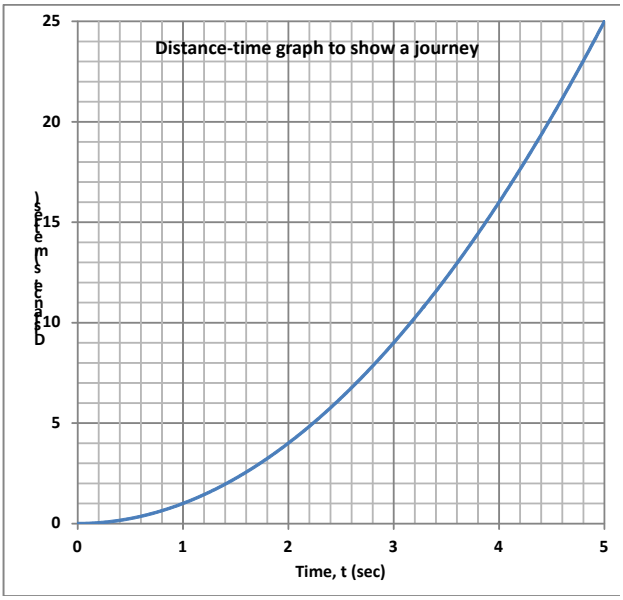
Calculate the *average* rate of change between t =1 and t = 4 seconds.

Instantaneous rate of change

Calculate the *instantaneous* rate of change at t = 2.

N.B. Be careful – the scale on the two axes is different.





Average vs. instantaneous rate of change

Example 2

Below are two versions of the same velocity-time graph

Average rate of change

Calculate the *average* rate of change between t = 0 and t = 4 seconds.

Instantaneous rate of change

Calculate the *instantaneous* rate of change at t = 3.

N.B. Be careful – the scale on the two axes is different.