

Graphing Motion – An Introduction to *Graphical Analysis*

We are going to use the data from practice book page 6 to show how the graphs of accelerated and non-accelerated motion look.

Non-accelerated motion

Fill in the chart below for the non-accelerated motion problem at the top of page 6.

time (s)	instantaneous (final) velocity (m/s)	acceleration (m/s ²)	distance traveled (m)	average velocity (m/s)
0.0	1.0			
1.0				
2.0				
3.0				
4.0				
5.0				

Using the program *Graphical Analysis*, graph:

- final velocity versus time
- distance traveled versus time

Accelerated motion

Fill in the chart below for the accelerated motion problem at the bottom of page 6.

time (s)	instantaneous (final) velocity (m/s)	acceleration (m/s ²)	distance traveled (m)	average velocity (m/s)
0.0	0.0	2.0	0.0	-----
1.0				
2.0				
3.0				
4.0				
5.0				

Using the program *Graphical Analysis*, graph:

- final velocity versus time
- distance traveled versus time
- acceleration versus time