Graphing

1. What is a graph for?
2. How do I decide what goes on the ‘sides of graphs’?
3. How do I determine my increments on my axis?
4. What else needs to be included in a graph?
5. Draw a graph of data from a car driving as shown below

|  |  |
| --- | --- |
| **Speed (m/s)** | **Time (s)** |
| 10 | 1 |
| 20 | 2 |
| 30 | 3 |
| 40 | 4 |
| 50 | 5 |
| 60 | 6 |
| 70 | 7 |



1. Now plot a graph of this data of this car’s movement. What is different? Do you need to make your axis different?

|  |  |
| --- | --- |
| **Speed (m/s)** | **Time (s)** |
| 10 | 1 |
| 20 | 2 |
| 30 | 3 |
| 40 | 4 |
| 44 | 5 |
| 59 | 6 |
| 70 | 7 |



Graphing Practice

1. An experiment was done to compare the volume of a liquid to its mass. Different amounts of liquid were poured into a container and the masses were measured. The results are shown in the following chart. Please graph the data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Volume of Liquid (mL)** | 10 | 20 | 30 | 40 | 50 |
| **Mass (g)** | 51 | 65 | 81 | 95 | 112 |



1. A student performed an experiment to investigate how changing the current flowing through a resistor would affect the voltage across the resistor. The student would select a specific current value and then measure the voltage. The student repeated this over with several different current values. The results are shown in the table below.

|  |  |
| --- | --- |
| **Current (A)** | **Voltage (V)** |
| 0.10 | 0.26 |
| 0.15 | 0.48 |
| 0.20 | 0.60 |
| 0.25 | 0.75 |
| 0.30 | 0.85 |
| 0.35 | 1.10 |
| 0.40 | 1.30 |



1. Arrhythmia is a disease in which one’s heart beats irregularly. The data below is a measure of the number of heart beats over an elapsed period of time of a patient who has arrhythmia.

|  |  |
| --- | --- |
| **Elapsed time (s)** | **# of Heart Beats** |
| 0.0 s | 0 |
| 10.0 s | 9 |
| 20.0 s | 21 |
| 30.0 s | 34 |
| 40.0 s | 45 |
| 50.0 s | 53 |
| 60.0 s | 62 |

Plot an appropriate graph of the data.

 