Graphing Position Time Graphs
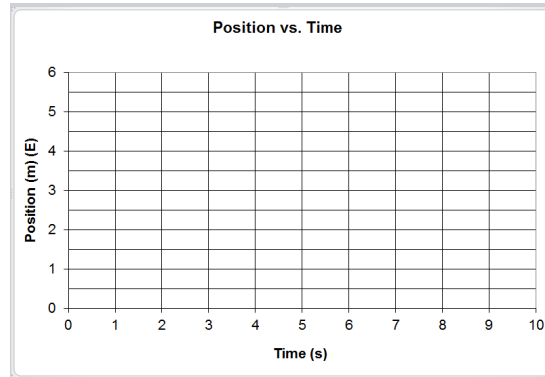- Data from a table can be plotted on a position time graph
  - ___position_____ is on the vertical axis
  - ____time_____ is on the horizontal axis

Example
- Plot the data for the position time graph

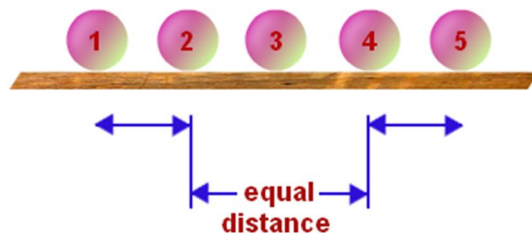| Time (s)	Position (m)
1.0	2.0
2.0	2.5
3.0	3.0
5.0	4.0
8.0	5.5

Position vs. Time

Is this object moving to the left or right? right

What do you notice about the shape of the graph? Straight line

A straight line passing through all points indicates__uniform motion__

Uniform Motion
- Uniform motion indicates that an object is not changing speed_.
- A moving object stays at the _same_ speed and continues to travel in the _same_____ direction
- A resting object _continues to stay at rest___.
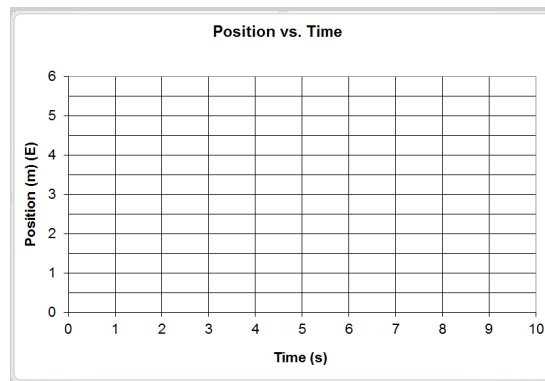- Objects in _uniform motion_ travel _equal distances__ in __equal time intervals___.

- This picture shows uniform motion because: each second, the ball travels the same distance; the distance between the ball at each time interval is the same

Example
- Plot the data for the position time graph

| Time (s)	Position (m)
0.0	5.0
2.0	4.0
4.0	3.0
6.0	2.0
8.0	1.0

Position vs. Time

Is this object moving to the left or right? left

Is the slope of this line positive or negative? negative

The slope of the line on a position time graph indicates __direction_____

Slope on a Position Time Graph
- The _slope_ of a graph refers to whether a line is going _up_ or _down__ at an angle, or _is a horizontal line__.
- Positive slope:
  - o Indicates motion in the direction of the _positive__ y-axis
- Zero slope:
  - o Indicates that the object is _stationary_.
- Negative slope:
  - o Indicates motion in the direction of the _negative__ y-axis.
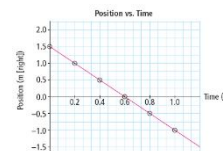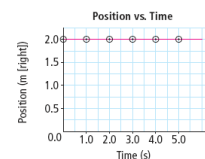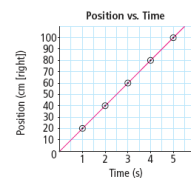
Line of Best Fit
- Often, real world data has _errors_ in measuring
- We draw a _best-fit__ line that is a _smooth_ curve or a _____straight line_ that fits the general shape outlined by the points
- We can often draw _several different_ best-fit lines

Note: **The best-fit line doesn't even need to contain any of the plotted points**