Physics 11 Unit 1 Graphing Worksheet

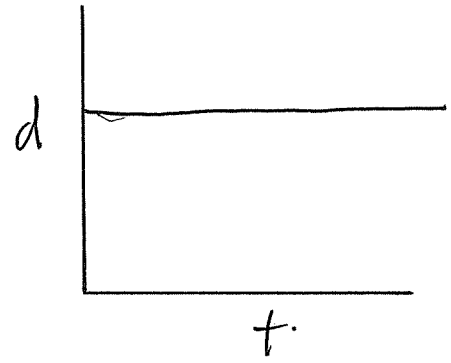
Name: _____ Date: _____

We often graph data because it allows to visualize patterns. Typically patterns are repeatable and once we recognize the pattern we can make predictions.

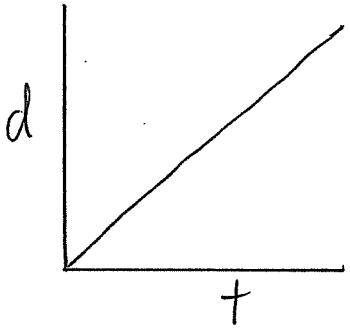
1. Distance vs time graphs

- The slope of a graph is rise/run
- For a d vs. t graph, slope = distance/time = velocity
- Based on this describe the motion depicted in the graphs below.

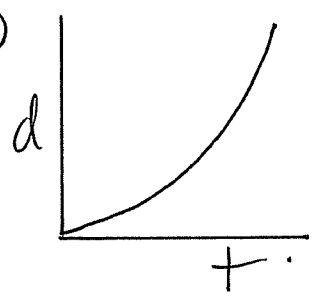
a)



b)



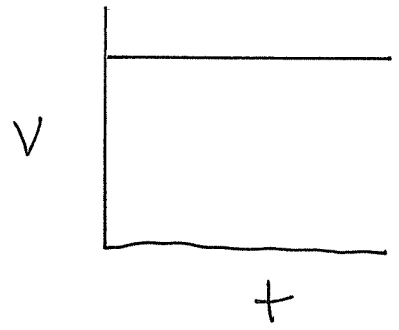
c)



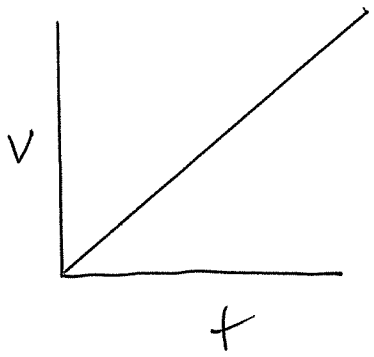
2. Velocity vs time graphs

- The slope of a graph is rise/run
- For a v vs. t graph, slope = velocity/time = acceleration
- Based on this describe the motion depicted in the graphs below.

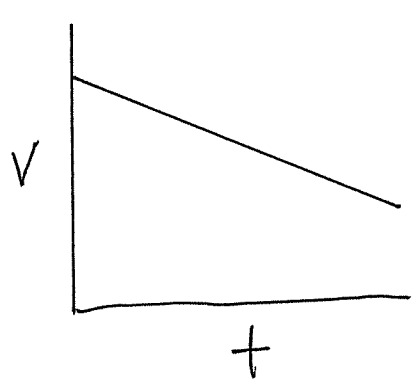
a)



b)

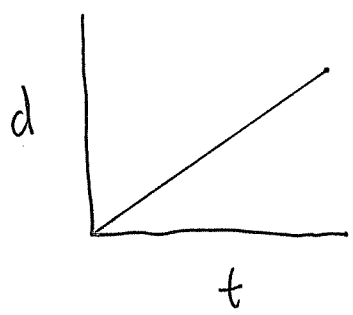


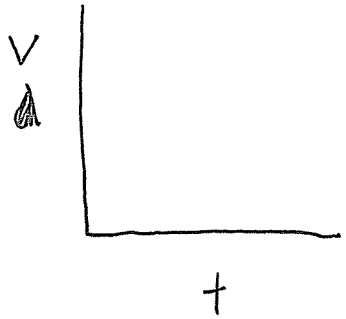
c)



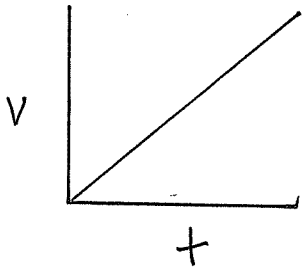
3. Study the first graph and construct the second graph which represents the same motion.

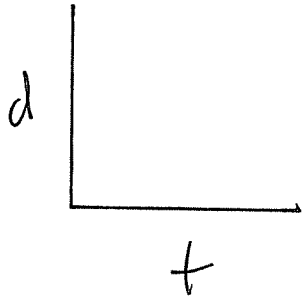
a)



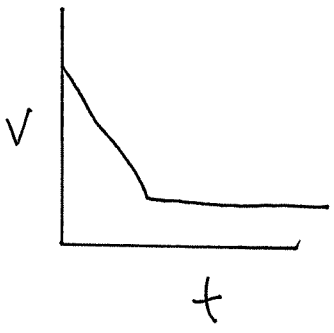


b)



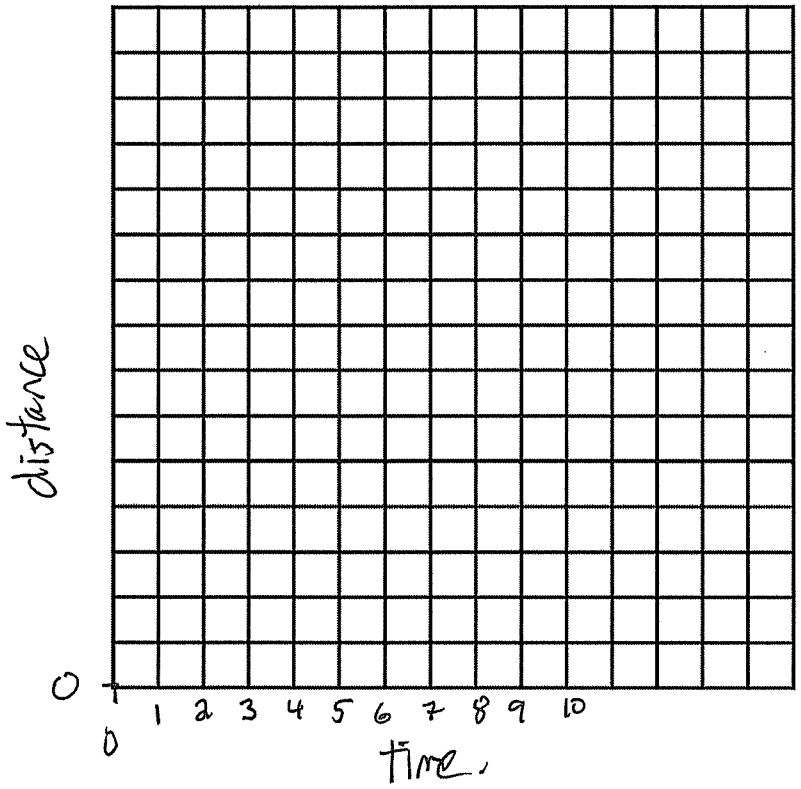


c).



4. Graph the following data in the graph provided

Time	Distance
1 sec	2
2	4
3	6
4	8
5	10
6	12
7	14
8	16
9	18
10	20



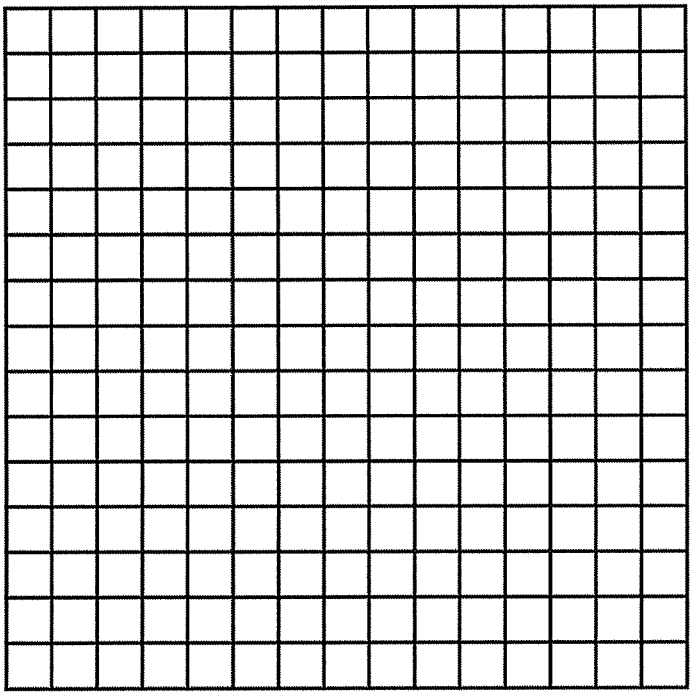
a) include a title, label the axis, draw a line through data

b) calculate the slope, show your working

c) describe the motion of the object

5. Graph the following data on the graph provided

Time	velocity
1 sec	15
2	20
3	25
4	30
5	35
6	40
7	45
8	50
9	55
10	60



a) include a title, label the axis, draw a straight line through the data

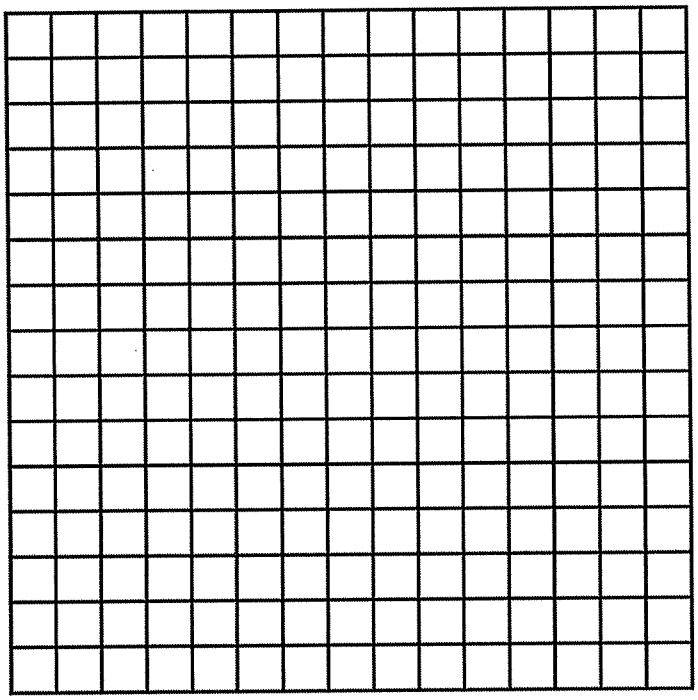
b) calculate the slope, show your working

c) write the specific equation of the line

d) describe the motion of the object

6. Graph the following data on the graph provided

Time	velocity
1 sec	3
2	6
3	9
4	11
5	15
6	19
7	21
8	24
9	29
10	30



a) include a title, label the axis, draw a best fit line through data

b) calculate the slope, show your working

c) write the specific equation of the line

d) describe the motion of the object