Worksheet -2 (Physics Lab I)

Q1. The following measurement data were obtained from an experiment. F (Newton) is force and V (m /s) is velocity.

a) Draw a linear fit line and get the equation between F & V. (F should be on the horizontal axis, V should be on vertical axis). What is the unit and dimension of this slope?
b) Draw power fit line between F and V and write the F-V equation and interpret the fit curve.
c) What is the unit and dimensions of k and m, from the fit line equation that you have obtained as $F = kV^m$ form.
f) Draw your chart on a sheet of paper.

F(N)	V(m/s)
2	12
4	48
6	108
8	195
10	300
12	432
14	588
16	765
18	972
20	1205
22	1460

Q2. The following table shows the V (m^3) "volume" and t (s) "time" data values. A) Try all trend line graphs in Excel and find the simplest and best mathematical relationship between V and t. B) Draw the two charts which has the worst and the best trend line.

t(s)	V (m^3)
1	4,946164
2	8,154845
3	13,44507
4	22,16717
5	36,54748
6	60,25661
7	99,34636
8	163,7945
9	270,0514
10	445,2395
11	734,0758