

Name:

Date:

Honors Chemistry

Practice Graphing using Excel

Directions: Use the data below and make the corresponding graphs. You will work in pairs and submit one set of graphs for you and your partner.

Graphing Using Excel Exercise

You are to graph each of the sets of data in each of the problems below. Be sure to include

- gridlines when printing data tables;
- graphs as large as possible so data and graphs print on the same page;
- the identification of the dependent and independent variable by indicating each at the bottom of the column in your data table;
- your name at the top of the page in bold letters;
- the number of the problem;
- one problem per page.

Regarding dependent and independent variables, in an experiment, the independent variable corresponds to factors you are varying and the dependent variable is the one you are measuring.

1. Your school is putting on a play. To raise money for the event, tickets for the play are being sold for \$3.00 each. The chart below shows how much money will be made from selling certain numbers of tickets. Construct a graph of the data using Excel.

Number of tickets sold	Amount of money collected
5	\$15
15	\$45
25	\$75
40	\$120
45	\$135

2. You collected data on the amount of rain that fell over a period of time. Your data is recorded in the table below. Identify the independent and dependent variables, and graph the data using Excel.

Time (days)	Depth of Rainwater in gauge (cm)
0	0.00
10	2
20	4
30	8
40	12
50	15

3. A student collects data in an experiment involving acids and bases. The student is adding base to an acid and noting the pH. Using the data below, identify the independent and dependent variables and graph the data using Excel.

mL of NaOH added	pH reading
0	4.9
1	4.9
2	5.1
3	5.2
4	5.3
5	5.3
6	5.3
7	5.5
8	5.6
9	5.7
10	5.8
11	5.9
12	6.2
13	6.5
14	7.7
15	10.4
16	10.8
17	11.0
18	11.3
19	11.3
20	11.9

4. You collected the following data for the volume of a gas at different pressures. Graph the data using Excel.

Pressure (atm)	Volume (L)
0.1	244
0.2	112
0.4	56
0.6	37.3
0.8	28

5. A student runs an experiment to determine the solubility of an unknown substance over a range of temperatures. Using the data collected from the experiment graph the data using Excel.

Temperature (°C)	Solubility (g/100 g H₂O)
0	5.5
10	6.1
20	8.6
30	11.2
40	30.1
50	38.5
60	45.6

6. A student performs an experiment to determine the melting temperature of a solid. The energy supplied to the system from the heating element remains constant throughout the experiment. Using the data below, graph it using Excel.

Time (min)	Temperature (°C)
0	32.1
0.5	63.3
1.0	52.2
1.5	59.1
2.0	61.1
2.5	61.5
3.0	61.5
3.5	61.3
4.0	61.6
4.5	62.0
5.0	64.3
5.5	67.4
6.0	68.9
6.5	69.8