SNC 2D1

Periodic Table Worksheet

Name:

1. The atomic # for hydrogen is 1 so it has 1 protons.
2. Neon is # 10 on the periodic table, so its atomic # is 10 and it has 10 protons. Its atomic mass # is 20.2 (round off to 20); so it must have 20 - 10 = 10 neutrons.
3. Aluminum is # 13 on the periodic table, so its atomic # is 13 and it has 13 protons. Its atomic mass # is 26.98 (round to 27); so it must have 27 - 13 = 14 neutrons.
4. Look up Beryllium on the periodic table. # of protons = 4; p + n = 9; n = 5.
5. Since Beryllium has 4 protons, it usually has 4 electrons total.
6. Beryllium is in Group 2 (second column) so it has 2 electrons in its outer shell (valence electrons).
7. Beryllium is in Period 2 (second row) so it has 2 electron shells.
8. Look up Potassium on the periodic table. # of protons = 19; p + n = 39; n = 20.
9. Since Potassium has 19 protons, it usually has 19 electrons total.
10. Potassium is in Group 1 (1 column) so it has 1 electrons in its outer shell (valence electrons).
11. Potassium is in Period 4 (4th row) so it has 4 electron shells.
12. Fill in the chart below (always round off the number for protons + neutrons):

	H	He	Li	Be	B	Ca	Xe	As	Al	Au
Atomic #	1	2	3	4	5	20	54	33	13	79
Protons	1	2	3	4	5	20	54	33	13	79
Atomic Mass #	1.01	4.0	6.94	9.01	10.8	40.1	131.3	74.9	26.9	196.9
Protons + Neutrons	1	4	7	9	11	40	131	75	27	197
Neutrons	0	2	4	5	6	20	77	42	14	118
Electrons (if neutral)	1	2	3	4	5	20	54	33	13	79
Group #	1	8	1	2	3	2	8	5	3	11
Valence Electrons	1	2	1	2	3	2	8	5	3	
Period #	1	1	2	2	2	4	5	4	3	6
Electron Shells	1	1	2	2	2	4	5	4	3	6

SNC 2DI

Periodic Table Worksheet #2

Name:

1. Every atom can only have 2 electrons maximum in the first shell.
2. Every atom can only have 8 electrons maximum in the second shell.
3. Every atom will only have 8 electrons in the third shell before the fourth shell starts filling up. (Okay, it can actually have 18 total, but after 8 it starts filling up the fourth shell for some complicated reason!)
4. Every atom wants a full outer shell. For most atoms this means 8 valence electrons. (This is called a "stable octet".) Some exceptions to the "stable octet" rule are: Helium, for a full outer shell it needs only 2 valence electrons; and most elements after #20 (Calcium).
5. Lithium only has 1 valence electron. To get a "stable octet" it could either gain 7 electrons or lose 1 electron. (It does the easiest option, so it will definitely ... lose 1
6. Beryllium only has 2 valence electrons. To get a "stable octet" it could either gain 6 electrons or lose 2 electrons. (It does the easiest option, so it will definitely ... lose 2
7. Fluorine only has 7 valence electrons. To get a "stable octet" it could either gain 1 electron or lose 7 electrons. (It does the easiest option, so it will definitely ... gain 1
8. Fill in the chart below:

	Li	Na	Be	Mg	Al	O	F	Cl	He	Ne
Valence Electrons	1	1	2	2	3	6	7	7	2	8
# of e's allowed in outer shell	8	8	8	8	8	8	8	8	2	8
# of e's it wants to gain	X	X	X	X	X	2	1	1	0	0
# of e's it wants to lose	1	1	2	2	3	X	X	X	X	X
An element it could partner with well	F	Cl	O	S	N	Mg	K	Fr	X	X

Electron Dot Diagram: Li Na Be Mg Al O F Cl