

Symmetry in Nature
Applications of Symmetry

Homework Assignment Week 2

1. Complete the following table. You need not complete the last column.

element	# of p	# of e	# of e gained or lost in ion formation	ion formed	anion or cation?	name of ion
Na	11	11	1 e lost	Na ⁺	cation	
K						
Mg						
Sr						
Ca						
Al						
In						
Sn						
Pb						
N						
P	15	15	3 e gained	P ³⁻	anion	
O						
S						
F						
Br						
Ne						
Ar						
Li						
Cl						

2. Name four properties of metals.
3. Give five examples for each of the following.
 - Metals
 - Non-metals
 - Metalloids
4. What is one important characteristic of elements that belong to the same group in the periodic table?
5. Give three examples for each of the following.
 - Transition metals
 - Alkali metals
 - Alkali earth metals
 - Halogens
 - Inert gases
 - Liquid element (2 examples only)
 - Gaseous elements
 - Solid elements
6. Atoms gain or lose electrons to form _____. The two types of ions are called _____ or _____ and _____ or _____.