CONCEPT: MAIN GROUP ELEMENTS: BONDING TYPES

- The major _____molecular chemical bonds are metallic, covalent and covalent network bonding.
  - □ _____ = Metallic bonding
  - □ _____= Covalent bonding
  - □ _____ = Covalent Network bonding
    - **Exception 1**: _____ is the only nonmetal with covalent network bonding.
    - **Exception 2**: _____ & _____ do not possess covalent network bonding.
  - □ **Recall:** Covalent Network elements have the _____ overall boiling points and melting points.

	1A (1)	2A (2)		3A (13)	4A (14)	5A (15)	6A (16)	7A (17)	8A (18)
1	H Hydrogen								He Helium
2	Li Lithium	Be Beryllium		B Boron	C Carbon	N Nitrogen	O Oxygen	F Fluorine	Ne Neon
3	Na Sodium	Mg Magnesium		Al Aluminum	Si Silicon	P Phosphorus	S Sulfur	Cl Chlorine	Ar Argon
4	K Potassium	Ca Calcium		Ga Gallium	Ge Germanium	As Arsenic	Se Selenium	Br Bromine	Kr Krypton
5	Rb Rubidium	Sr Strontium		In Indium	Sn Tin	Sb Antimony	Te Tellurium	I Iodine	Xe Xenon
6	Cs Cesium	Ba Barium		Tl Thallium	Pb Lead	Bi Bismuth	Po Polonium	At Astatine	Rn Radon
7	Fr Francium	Ra Radium		Nh Nihonium	Fl Flerovium	Mc Moscovium	Lv Livermorium	Ts Tennessine	Og Oganesson

Transition Metals

EXAMPLE: Identify the element that is expected to have the highest melting point.

a) Iodine b) Magnesium c) Bromine d) Carbon e) Sodium

PRACTICE: What is the most common type of chemical bonding found within I_2 solid?

a) Covalent b) Network Covalent c) Ionic d) Organic e) Metallic