

Name _____

Block _____

Date _____

CHEMISTRY

PERIODIC TRENDS QUIZ

1. Circle the element in each pair with the lower first ionization energy:

- a. Iron or barium
- b. Calcium or beryllium
- c. Neon or lithium
- d. Chlorine or gallium
- e. Iodine or fluorine

2. Arrange the following elements in order of decreasing electronegativity.

- a. potassium, selenium, cobalt
- b. sodium, potassium, rubidium
- c. oxygen, silicon, fluorine
- d. phosphorus, arsenic, nitrogen
- e. lead, cesium, astatine

3. Circle the atom in each pair with the larger atomic radius.

- a. Li or O
- b. Pt or Ni
- c. Ga or Cl
- d. O or Ne
- e. Fe or V

4. Circle the smallest of the three:

- a magnesium atom
- a magnesium ion
- a calcium atom

5. Circle the largest of the three:

- an oxygen atom
- a sulfur atom
- a sulfur ion (sulfide)

6. Circle the smaller particle in each pair.
- aluminum atom aluminum ion
 - bromine atom copper atom
 - nitrogen atom nitrogen ion (nitride)
 - neon atom helium atom
 - lithium atom lithium ion
7. Circle the element with the lower electronegativity in each pair.
- sodium hydrogen
 - beryllium fluorine
 - germanium oxygen
 - oxygen nitrogen
 - cesium iodine
8. Circle the element with the greater first ionization energy in each pair.
- potassium sodium
 - sulfur argon
 - fluorine helium
 - oxygen zinc
 - germanium tin
9. Complete the following chart, comparing the elements magnesium and aluminum.

Property	Mg or Al?
Smaller neutral atom	
Lower first ionization energy	
Greater jump between 3 rd and 4 th ionization energies	
Lower electronegativity	
Forms smaller ion	