

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_ Page: \_\_\_\_\_

### Periodic Trends Review

Use the following periodic table to answer the questions.

1																	18
	2												13	14	15	16	17
	X														Z		A
		3	4	5	6	7	8	9	10	11	12	D				E	G
Q															T		
R																J	

- Arrange A, X and Z in order of increasing atomic radius.  
**A, Z, X**
- Which atom loses an electron more easily (*less energy*), E or J? *ionization energy*  
**J**
- Which atom is smaller, Q or R? *atomic radius*  
**Q**
- Arrange G, D and E in order of increasing electronegativity.  
**D, E, G**
- If metals lose electrons when reacting, and nonmetals gain electrons when reacting, which **pair** of elements is most likely to react?
  - X and R – **2 metals**
  - X and A – **metal + noble gas**
  - Z and G – **2 nonmetals**
  - Q and G
- Which element has higher ionization energy, Q or T?  
**T**
- Which element has a higher electronegativity, Z or T?  
**Z**
- Which element is unlikely to react with any of the others? **Noble gases – they have a full outer shell**

Answer the following questions. Use your Periodic Table Trends Lab and your periodic table if necessary.

1. Arrange the following groups of elements in order of increasing atomic radius.

a. Al, Mg, Na, S, Si

S, Si, Al, Mg, Na

b. As, Br, Ga, Ge, Se

Br, Se, As, Ge, Ga

c. Be, F, Li, N, O

F, O, N, Be, Li

d. C, Ge, Pb, Si, Sn

C, Si, Ge, Sn, Pb

2. Arrange the following groups of elements in order of increasing first ionization energy.

a. As, Bi, N, P, Sb

Bi, Sb, As, P, N

b. Be, B, C, F, Li, N, O

Li, Be, B, C, N, O, F

c. Ba, Be, Ca, Mg, Sr

Ba, Sr, Ca, Mg, Be

d. Ba, Cs, Pb, Po, Tl

Cs, Ba, Tl, Pb, Po

3. Arrange the following groups of elements in order of increasing electronegativity.

a. Al, Cl, Mg, Na, S, Si,

Na, Mg, Al, Si, S, Cl

b. C, Ge, Pb, Si, Sn,

Pb, Sn, Ge, Si, C

c. Br, Ca, Ga, Ge, K

K, Ca, Ga, Ge, Br

d. Sb, Sn, Sr, Tc, Te,

Sr, Tc, Sn, Sb, Te