

Name: _____

PERIODIC TRENDS REVIEW AND PRACTICE

Question One

Rank the following in order of **increasing** ionic radius: O, S, and F.

Question Two

Which has the **largest** ionization energy: N, O, or Cl?

Question Three

In each of the following pairs, circle the species with the **largest** electronegativity.

- a. Li or Cs b. Cl or Ar c. Ca or Br d. Na or Ne e. B or Be

Question Four

Circle the best choice in each list:

- a. **highest** ionization energy: C, N, Si
b. **largest** ionic radius: P^{-3} , S^{-2} , Cl^{-1}
c. **highest** electronegativity: As, Sn, S
d. **smallest** atomic radius Na, Li, Be
e. **least** reactive Rb, K, Be

Question Five

In each of the following pairs, circle the species with the **larger** atomic radius:

- a. Mg or Ba b. S or S^{-2} c. Cu^{+2} or Cu d. He or H e. Na or Cl

Question Six

In each of the following pairs, circle the species that is **most** reactive.

- a. Li or Be b. Fe or Cu c. P or Cl d. Na or Fr e. O or Cl

Question Seven

Arrange the following elements in order of decreasing atomic radius: **sulfur, chlorine, aluminum** and **sodium**. Explain if your arrangement demonstrates a periodic trend or a group trend.

Question Eight

Indicate whether the following properties increase or decrease from left to right across the periodic table. Account for the trend using the atomic model.

Trend	Increasing or Decreasing	Explanation
Atomic radius		
Ionization energy		
Electronegativity		

Question Nine

When a chlorine atom forms an ion its radius increases, but when a sodium atom forms an ion its radius decreases. Explain this apparent contradiction.