PERIODIC TRENDS

1. EXPLAIN WHY FLUORINE HAS A SMALLER ATOMIC RADIUIS THAN BOTH OXYGEN AND CHLORINE.

2. ARRANGE THESE ELEMENTS IN ORDER OF DECREASING ATOMIC SIZE: SULFUR, CHLORINE, ALUMINUM, AND SODIUM. DOES THIS SHOW A PERIODIC OR A GROUP TREND?

3. DISTINGUISH BETWEEN THE FIRST AND THE SECOND IONIZATION ENERGIES OF AN ATOM.

4. INDICATE WHICH ELEMENT IN EACH OF THE FOLLOWING PAIRS HAS GREATER FIRST IONIZATION ENERGY. (A) LITHIUM, BORON (B) CESIUM, ALUMINUM (C) MAGNESIUM, STRONTIUM

5. WHICH PARTICLE HAS THE LARGEST RADIUS IN EACH ATOM/ION PAIR?
(A) Na, Na^{+} (B) S, S^{-2} (C) I, I^{-} (D) Al, Al^{+3}

6. WHICH OF THESE ELEMENTS HAAS A LARGER IONIZATION ENERGY?
(A) SODIUM OR POTASSIUM (B) MAGNESIUM OR PHOSPHOROUS

7. IN GENERAL, WOULD YOU EXPECT METALS OR NONMETALS TO HAVE HIGHER IONIZATION ENERGIES? EXPLAIN

8. ARRANGE THE FOLLOWING ELEMENTS IN ORDER OF INCREASING IONIZATION ENERGY.
(A) Be, Mg, Sr (B) Bi, Cs, Ba (C) Na, Al, S

9. IN EACH PAIR, WHICH ELEMENT IS MORE ELECTRONEGATIVE?
(A) Cl, F (B) C, N (C) Mg, Ne (D) Ca, As

10. IN EACH PAIR, WHICH HAS GREATER ATOMIC RADIUIS?
(a) Na, Li (B) Sr, Mg (C) C, Ge (D) Se, O