SCH 3U0 Name:

Periodic Trends Practice

1. Which of the following has the largest atomic radius? Why? Mg Ca Sr
2. Which of the following is the smallest atom? Why? Al Si P
3. Which of the two atoms is greater in radius? Why? Mg Mg^{2+}
4. Which of the following atoms is smaller in radius? Why? Br Br^-
5. Which of the following has the highest 1st ionization energy? Why? Be Mg Ca
6. Which of the following has the highest 1st ionization energy? Why? K Ca Br
7. Which of the following is the most electronegative? Why? F Cl I
8. Which of the following is the most electronegative? Why? Na Mg Al

9. Using only their location on the periodic table, rank the atoms in each set by decreasing atomic size.

a. Br, Rb, Kr: b. Se, Br, Cl: c. Te, Se, Sr:

10. Rank the elements in each set by increasing 1st ionization energy. Explain.

a. Xe, He, Ar b. Sr, Ca, Ba

c. Sn, In, Sb d. Kr, Br, K

e. K, Ca, Rb f. Kr, Br, Rb

11. Identify the atom in each pair with the lowest 1st ionization energy. Explain.

a. B, O b. B, In c. I, F d. F, N e. Ca, K

12. Which element will have lower electron affinity? Explain.

a. K or Ca b. O or Li c. Cs or F d. S or Se

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9. Using only their location on the periodic table, rank the atoms in each set by decreasing atomic size.

b. Br, Rb, Kr: b. Se, Br, Cl: c. Te, Se, Sr:

10. Rank the elements in each set by increasing 1st ionization energy. Explain.

b. Xe, He, Ar b. Sr, Ca, Ba

c. Sn, In, Sb d. Kr, Br, K

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