socrative

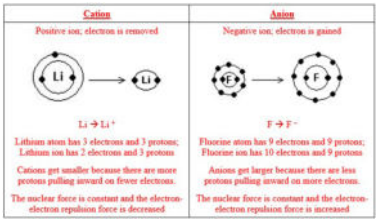
# Review of Periodic Trends and Ionic Bonding #1

Score: _____

**1. A plus (+) sign means that the atom _____ electrons. A minus sign means that the atom _____ electrons.**

(A) loses, gains

(B) gains, loses



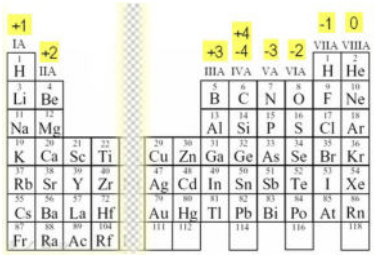

**2. What do oxidation numbers represent about an atom?**

(A) The number of core electrons an atom will lose or gain to become stable.

(B) The number of protons an atom will lose or gain to become stable.

(C) How many valence electrons an atom will lose or gain to become stable.

(D) The number of neutrons an atom will lose or gain to become stable.



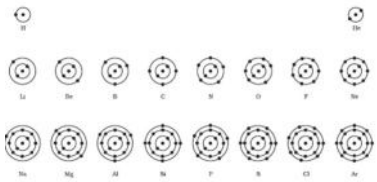
**3. Explain why atomic size increases with increasing atomic number as you move down a group.**

(A) More protons are added as you move down a group.

(B) More energy orbitals are added as you move down a group.

(C) More valence electrons are added as you move down a group.

(D) Atomic size does not change as you move down a group.



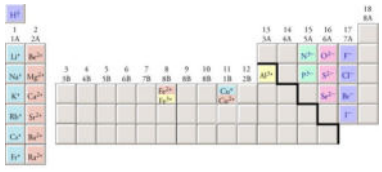
**4. Metals tend to _____ electrons and have a _____ oxidation number, while nonmetals tend to _____ electrons and have a _____ oxidation number.**

(A) gain, positive, lose, negative

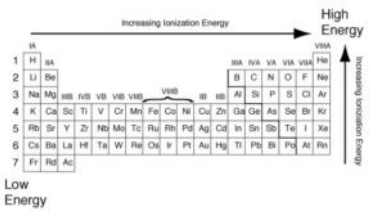
(B) gain, negative, lose, positive

(C) lose, negative, gain, positive

(D) lose, positive, gain, negative



5. **All of the following are TRUE of ionization energy *EXCEPT***



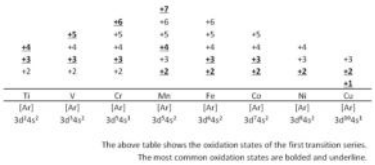

A. An atom with a high ionization energy value is not likely to form a positive ion.

B. Atoms with high ionization energy are metals that want to gain electrons and become negative.

C. Atoms with high ionization energy are non-metals that want to gain electrons and become negative.

D. Atoms with high ionization energy hold onto their electrons very tightly and will not lose them easily.

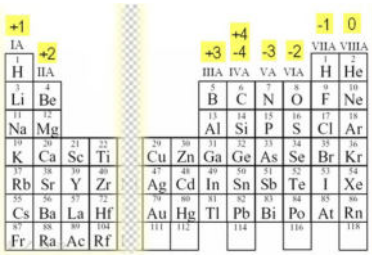
6. **True or False- Some elements can have more than one oxidation number.**




A. True

B. False

7. **All of the following are TRUE descriptions of an element's oxidation number *EXCEPT***



A. Oxidation #'s indicate the number of valence electrons lost or gained to create a stable ion.

B. Group 1 and 2 have a +1 and +2 oxidation number respectively.

C. Groups 15 – 17 have -3, -2 and -1 oxidation numbers respectively.

D. Oxidation #'s are the same as the element's group # (i.e. group 1 has an oxidation # of 1 and group 17 has an oxidation # of 17).

8. **Explain why atomic size decreases with increasing atomic number as you move across a period.**

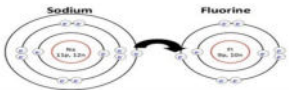

A. Atomic size decreases because electron-electron repulsion is increasing.

B. Atomic size decreases because the electromagnetic force is increasing.

C. Atomic size decreases because atoms have fewer valence electrons.

D. Atomic size decreases because atoms have fewer protons and electrons.

9. **When atoms lose or gain electrons to become ions, they do so to obtain _____ electrons in their outer orbital. This is called the _____ rule.**




A. 2, noble gas

B. 8, octet

C. 18, bonding

D. 6, ionic bonding

10. An ionic bond is a chemical bond formed when electrons are _____ from the _____ energy level of one atom to the _____ energy level of another atom.

A) transferred, outer, inner

B) shared, outer, inner

C) transferred, outer, outer

D) shared, outer, outer