

Chapter 19.1 and 19.2 Reading Questions

(Please read through the text to define these words. Use the wording from the book. Please don't just turn right to the glossary or the internet for definitions.)

Due Tuesday 4/15/14 19.1 Chemical Bonds

1. React
 2. Chemical Bonds
 3. Energy Levels
 4. Valence Electrons
 5. Octet
 6. Octet Rule
 7. Transition Metals
 8. Lewis Dot
 9. Ionic Bond
 10. Ions
 11. Covalent Bond
 12. Diatomic Molecules
 13. Polymers
14. Fill in the blanks: Most atoms are _____ unless they _____ with other atoms.
15. What is the maximum number of valence electrons an atom can have? What is the exception to this rule?
16. In order to achieve this octet, atoms will _____, _____ or _____ electrons.
17. Explain why lithium loses one electron when it makes a chemical bond.
18. On the periodic table, what are the common names for the group 1 elements, group 17 elements, group 18 elements and group 3-12 elements?

Due Tuesday 4/22/14 19.2 Chemical Formulas

1. Chemical Formula
 2. Ionic Compound
 3. Oxidation Number
 4. Monoatomic Ions
 5. Subscripts
 6. Polyatomic Ions
 7. Covalent Compounds
 8. Binary Compounds
 9. Empirical Formula
 10. Molecular Formula
11. What is different about how you write oxidation number from how you write the charge on an ion?

Due Thursday 4/24/14 Chapter 19 Bookwork Pg 353-356

- Set 1 # 1-5
- Set 2 #1-4
- Concept Review # 1-9
- Problems # 1-5, 11

Chapter 19 (Sections 19.1 and 19.2 Only) Test Date Thursday 4/24/14

(This test will have a small multiple choice portion (mostly on the vocabulary word above) and a large written portion. On the written portion you will need to be able to find charges on ions, draw Lewis dot structures, find ionic and covalent bonds, use polyatomic ions to make ionic bonds and demonstrate several other skills we covered in class. By the date of the test we will have had worksheets or activities covering each of these topics.)

Turn Over For Extra Credit

Chapter 19.1 & 19.2 Exam Review Extra Credit

1. What is a compound?
2. What is an Ion?
3. Know how to find the charge on an ion.
4. Try these: Na, Cl, O, N, Al, Mg, Ca.
5. Which types of atoms form positive ions, which form negative ions? (Hint you will be using the words metal and nonmetal)
6. What is a positive ion called? A negative ion?
7. Know how to write and name an ionic formula:
8. Try these:
 - a. **K** and **P** **Formula:** _____ **Name:** _____
 - b. **Na** and **N** **Formula:** _____ **Name:** _____
 - c. **K** and **I** **Formula:** _____ **Name:** _____
 - d. **O** and **Al** **Formula:** _____ **Name:** _____
 - e. **S** and **Ca** **Formula:** _____ **Name:** _____
9. What does it mean for an atom to have an octet?
10. Why does an atom "want" to fill its outer electron shell? What are the electrons in this outer shell called?
11. Know how to draw a Lewis Dot Structure. Try these: Na, Cl, O, N, Al, Mg, Ca.
12. Define Chemical Bond
13. Define Chemical Bond, Diatomic Molecule, Binary Compound, Polyatomic ions and Monoatomic Ions
14. What is the difference between the oxidation number and the charge?
15. Be able to write the formula and name polyatomic ions.
16. Try these:
 - a. NH_4 & O **Formula:** _____ **Name:** _____
 - b. Ca & CO_3 **Formula:** _____ **Name:** _____
 - c. HCO_3 & Na **Formula:** _____ **Name:** _____
 - d. NO_3 & Mg **Formula:** _____ **Name:** _____
 - e. K & SO_4 **Formula:** _____ **Name:** _____
17. Know how to get the name from a formula.
18. Try these:
 - f. Sodium Oxide **Ions:** _____ **Formula:** _____
 - g. Potassium Bromide **Ions:** _____ **Formula:** _____
 - h. Calcium Nitride **Ions:** _____ **Formula:** _____
 - i. Beryllium Sulfide **Ions:** _____ **Formula:** _____
 - j. Magnesium Iodide **Ions:** _____ **Formula:** _____
19. What is the difference between ionic and covalent bonds? (Look at the chart in your notes)
20. Know how to draw Lewis structures that show bonding (like we did in the ball activities.) Try these:
Ionic: Mg & N Covalent: H_2O_2
21. Talk about what happens to electrons in ionic bonds and covalent bonds.
22. Know how to tell the difference between an ionic and a covalent bond.
23. Know the names of these groups on the periodic table, alkali metals, alkaline-earth metals, halogens, noble gases, transition metals.
24. Which atoms are considered non-metals? Which are metals?
25. Do metals usually form positive or negative ions? What about non-metals?