

Name: _____ Test Date: Wednesday, December 18

Test Review: Chapter 19 & 20: Bonding and Equations

1. What are valence electrons? _____
2. What is the Octet Rule? _____
3. An ion with a negative charge = _____. An ion with a positive charge = _____.
4. What is a monatomic ion? _____
5. Name 2 characteristics of an Ionic Bond
 - 1) _____
 - 2) _____
6. Name 2 characteristics of a Covalent Bond
 - 1) _____
 - 2) _____
7. Complete the chart

Elements	Ionic or Covalent	Bonding Dot Model	Chemical Name	Chemical Formula
Lithium & Oxygen				
Hydrogen & Sulfur				
Calcium & Chlorine				
Oxygen & Fluorine				

8. Write the correct formulas and names, using symbols and subscripts (criss-cross method)
 - Calcium and Iodine _____
 - Sodium and Bromine _____
 - Carbon and Fluorine _____
 - Aluminum and Oxygen _____

9. Identify as physical (P) or chemical reaction (C):

___freezing water	___bending clay	___water evaporating on a hot day
___decaying wood	___burning paper	___CaCl ₂ reacting with vinegar
___grinding rocks	___rusting metal	___digestion of food

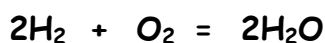
10. List the 5 signs that a chemical change/reaction has occurred.

11. Identify the following reactions as endothermic (Endo) or exothermic (Exo)

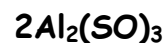
_____ gives off energy _____ Absorbs energy _____ fireworks
_____ feels hot _____ Feels cold _____ cold packs

** Know which experiments from the reaction labs (pg 44) were endothermic and exothermic.**

12. In the following reaction, label reactants, products, coefficients and subscripts



13. Count atoms in the following chemical formulas:



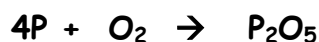
14. Answer the following for this chemical formula. $2\text{C}_6\text{H}_{12}\text{O}_6$

Number of Elements involved: _____

Number of Atoms per element: _____

Number of Molecules of $\text{C}_6\text{H}_{12}\text{O}_6$: _____

15. Balance the following equations:



16. The Law of Conservation of Mass states that matter can neither be _____ nor _____.

17. If your reactants are 4g of substance A and 3g of substance B, the Law of Conservation of Mass states that your product should be _____g.

18. Does the following equation meet the Law of Conservation of Mass? _____ Show your work.

