**Test 2 Study Guide**

1. Compare/contrast chemical and physical reactions.
2. Describe 2 examples of each (physical and chemical reactions).
3. What are “phase changes” and why are they physical changes?
4. How do you know a chemical reaction has taken place (evidence)?
5. How do you know a physical reaction has taken place (evidence)?
6. What is freezing point, melting point, and boiling point?
7. What happens to the movement of molecules when a substance is heated? Cooled?
8. How is a precipitate formed (what is a precipitate)?
9. Define closed system and open system.
10. Why is it beneficial to perform experiments in a closed system?
11. During an EXOthermic reaction, energy/heat is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the temperature   
      
    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. During an ENDOthermic reaction, energy/heat is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the temperature   
      
    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
13. What is the law of conservation of mass/matter?
14. According to the law of conservation of mass/matter, the **mass of the reactants** must   
      
    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the **mass of the products**.
15. What are reactants? Which side of the arrow are they on?
16. What are products? Which side of the arrow are they on?
17. How do you calculate density?

\*Know how to balance chemical equations.

1. What does the coefficient tell you?
2. How do you find the TOTAL number of atoms?

Use the following equation to answer questions **19-20**.

**2C6H6 + 15O2 → 12CO2 + 6H2O**

1. How many **molecules** of water (H2O) are there on the **product** side?
2. How many **total atoms** of Carbon (C) are there on the **reactant** side?
3. Balance the following equation.

**AlBr3 + K → KBr + Al**