

STUDY SHEET

EXAM 1

1. Define and/or describe: atomic mass, compound, density, element, endothermic, equation, exothermic, formula, group (family), matter, molecule, period, pure substance, mixture, specific gravity, symbol, temperature, transition element (metal).
2. Distinguish between: exact number and measured number, mixture and pure substance, element and compound, homogeneous mixture and heterogeneous mixture, physical property and chemical property, physical change and chemical change, kinetic energy and potential energy.
3. Convert a given decimal number to scientific (exponential) notation and vice versa.
5. Report data obtained by reading a scale to the correct number of significant figures.
6. Given a measured number tell how many significant figures it has.
7. Round a given number to a specified number of significant figures.
8. Round off a calculated answer to the correct number of significant figures.
9. Make Metric-Metric conversions by dimensional analysis. (Know the Metric prefixes; kilo-, deci-, centi-, milli-, micro-, and nano-; their abbreviations; and their numerical relationship to the basic Metric unit)
10. Make English-Metric conversions by dimensional analysis given appropriate conversion factors.
11. Density & Specific Gravity
 - a. Given an experimental mass and volume calculate density.
 - b. Using density as a conversion factor, calculate mass from volume or vice versa.
 - c. Given specific gravity calculate density and vice versa.
12. Make temperature conversions between Kelvin and Celsius.
13. Given the names write the symbols, and vice versa, of 44 common elements. (Refer to handout)
14. Periodic Table
 - a. Read atomic number and atomic mass from the table.
 - b. Identify periods and groups.
 - c. Write the common names of groups IA, IIA, VIIA, and VIII.
 - d. Classify given elements as metals, nonmetals, or metalloids.
 - e. Identify the state of matter at room temperature of a given element.
 - f. Tell which elements are diatomic and be able to write their molecular formulas.
15. Recognize the laws of Conservation of Mass and Conservation of Energy.
16. Be able to solve any of the assigned textbook problems (problems at the back of a chapter that are assigned but not collected) or worksheet problems.