

Physical Science 10  
Exam Review #2 Chemical Reactions

1. Define each of the following:
  - a. Law of conservation of mass
  - b. Reactants
  - c. Products
  - d. Synthesis
  - e. Decomposition
  - f. Single displacement reaction
  - g. Double displacement reaction
  - h. Complete Combustion
  - i. Incomplete Combustion
2. For each of the following reactions
  - a. Write a balance chemical Equation
  - b. Identify the type of reaction
    - i. iron (II) oxide  $\rightarrow$  iron + oxygen
    - ii. zinc + sodium sulphide  $\rightarrow$  sodium + zinc sulfide
    - iii. calcium chloride + lithium nitrate  $\rightarrow$  calcium nitrate + lithium chloride
    - iv. magnesium + oxygen  $\rightarrow$  magnesium oxide
    - v. chlorine + silver bromide  $\rightarrow$  bromide + silver chloride
    - vi. copper + barium sulphate  $\rightarrow$  barium + copper (I) sulphate
    - vii. sodium hydroxide + calcium carbonate  $\rightarrow$  sodium carbonate + calcium hydroxide
    - viii. potassium chloride  $\rightarrow$  potassium + chlorine
    - ix. magnesium nitrate + sodium hydroxide  $\rightarrow$  magnesium hydroxide + sodium nitrate
3. For each of the following combustion reactions, complete the balance chemical reaction
  - a)  $\text{C}_2\text{H}_4 + \text{O}_2 \rightarrow$   
complete combustion
  - b)  $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow$   
incomplete combustion
  - c)  $\text{CH}_4 + \text{O}_2 \rightarrow$   
complete combustion
4. Solution A has a mass of 62g. Solution B has a mass of 89g. When they are mixed, a chemical reaction occurs in which a gas is produced. If the mass of the final mixture is 146g, what mass of gas was produced? Define the law of conservation of mass using this example.