

Name: _____

Chapter 10 Practice Worksheet

**Show your work or no credit!! Don't forget units.

*Section 10.1

1. What is the molar mass of the following substances?
 - a. iron (III) acetate
 - b. aluminum nitrate
 - c. sulfuric acid
 - d. dinitrogen pentoxide

*Section 10.2

2. Make the following conversions:
 - a. Convert 5.99 mol of diphosphorous pentoxide to liters at STP.
 - b. Convert 97.3g lithium oxide to moles.
 - c. Convert 12.7 mol of silicon dioxide to molecules.
 - d. Convert 87.6L of nitrogen to moles at STP.
 - e. Convert 16.31 mol of magnesium chloride to grams.

*Section 10.3

3. What is the percent composition of the following compounds?
 - a. A sample is found to contain 40.7g of carbon, 12.3g of hydrogen, and 16.9g of oxygen.

b. MgSO_4

4. What is the empirical formula for the following? (This is not a problem, just reduce the subscripts if possible)

a. $\text{C}_{12}\text{H}_{22}\text{O}_{11}$

b. H_2O_2

c. P_4O_{10}

5. Calculate the empirical formula for the following compounds:

a. 75% C and 25% H

b. 40.92% C, 4.58% H, and 54.50% O

6. Calculate the molecular formula for the following compounds:

a. The empirical formula of a compound is CH_2 and the molar mass is 70 g/mol.

b. The empirical formula of a compound is NO_2 and the molar mass is 92 g/mol.

Trident – Island Berry Lime (Trident Wrapper) – Xylitol

Extra – Mixed Berry (Silver Wrigley Wrapper) – Sorbitol

Stride Sour Patch Kids – Redberry (Small Silver Wrapper) –
Sucralose

Winterfresh (White Wrigley Wrapper) – Aspartame

Dubble Bubble (Dubble Bubble Wrapper) - sugar