

Name: _____

Honors 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

*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.

*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. $C_{12}H_{22}O_{11}$
 - 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.
7. A compound is 54.5% C, 9.1% H, and 36.4% O. Its molar mass is 88 g/mol. What is its molecular formula? (Hint: This is an empirical formula/ molecular formula problem.)

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