Name: _____ **20 Pts.**

Chemistry Practice: Formulas of Compounds
SHOW All WORK!

1. Write the empirical formula for each of these compounds:

a.) P_4O_{10} _____ c.) $C_6H_{14}O_2$ _____

b.) Cl_2O_5 _____ d.) $HO_2CC_4H_8CO_2H$ _____

2. Find the percent composition for the indicated element in each compound. **Report percent to the 10^{ths} place**.

a.) Percentage of nitrogen in N_2O_5:

c.) Percentage of sodium in monosodium glutamate, $NaC_5H_8NO_4$

b.) Percentage of magnesium in magnesium phosphate

3. Find the formula for the following substances. **Box final answer**.

a.) 4.32 grams of Cu with 1.09 grams of S

b.) 14.618 grams C, 1.474 grams H and 3.898 grams O

c.) 3.618 grams Fe and 1.382 grams O

d.) 63.0 g Rb, 5.90 g O

e.) 0.00495 g Th, 0.00137 g S

f.) 2.13 g Na, 2.32 g As, 1.98 g O

g.) A compound with a molar mass of 142 g/mol has the composition of 50.7% C, 9.9%H and 39.4% N. What is the empirical and molecular formula of this compound?

h.) A compound of iridium, Ir, and oxygen was produced in a lab by heating iridium in a crucible. The data was collected:

Mass of crucible:	38.26 g
Mass of crucible and iridium:	39.52 g
Mass of crucible and iridium oxide:	39.73 g

a.) Calculate the percent composition of the compound.

b.) What is the empirical formula of this compound?

c.) Is this compound ionic or covalent? _____

d.) Name this compound: _____ * Need Roman Numerals!!!

i.) A compound of molybdenum, Mo, and oxygen was produced in a lab by heating molybdenum in a crucible. The data was collected:

Mass of crucible:	41.15 g
Mass of crucible and tantalum:	43.53 g
Mass of crucible and tantalum oxide:	44.06 g

b.) Calculate the percent composition of the compound.

e.) What is the empirical formula of this compound?

f.) Is this compound ionic or covalent? _____

g.) Name this compound: _____ * Need Roman Numerals!!!

j.) A compound with a molar mass of 180 g/mol has the composition of 7.200 g C, 3.000 g H and 4.800 g O. What is the empirical and molecular formula of this compound?