Dougherty Valley HS Chemistry
Chemical Compositions – % Composition and Empirical

Worksheet #2

Name: **Period:** **Seat#:**

Percent Composition and Empirical Formula Race Questions

Your teacher will give you instructions on how to do this portion of the worksheet!

Question #1	**Question #2**
Question #3	
Question #4	
Question #5	

Worksheet Questions

Show work for ANY math problem. Include ALL units.

1) Write the empirical formula for C_2H_6	**2)** Write the empirical formula for CH_2O	**3)** Write the empirical formula for CH_3COOH	**4)** Write the empirical formula for H_2O
5) Calculate % composition of each element in KNO_3			

K = 38.67%, N = 13.86%, O= 47.48%

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6) Calculate % composition of each element in H_2SO_4

H = 2.06%, S= 32.69%, O = 65.26%]

7) Calculate % composition of each element in $C_6H_5NH_2$

C = 77.38%, H = 7.58%, N = 15.04%

8) A compound is found to have (by mass) 48.38% carbon, 8.12% hydrogen and the rest oxygen. What is its empirical formula?

$C_3H_6O_2$

9) A compound is found to have 46.67% nitrogen, 6.70% hydrogen, 19.98% carbon and 26.65% oxygen. What is its empirical formula?

CH_4N_2O

10) A compound is known to have an empirical formula of CH and a molar mass of 78.11 g/mol. What is its molecular formula?

C_6H_6

11) Another compound, also with an empirical formula if CH is found to have a molar mass of 26.04 g/mol. What is its molecular formula?

C_2H_2

12) A compound is found to have 1.121 g nitrogen, 0.161 g hydrogen, 0.480 g carbon and 0.640 g oxygen. What is its empirical formula? If the molar mass of the compound is 180.2 g/mol then what is the molecular formula for the compound?

CH_4N_2O