**Name: Period: Seat#:**

**Worksheet #6**

**Percent Composition and Empirical Formula Race Questions***Your teacher will give you instructions on how to do this portion of the worksheet!*

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

**Worksheet Questions***Show work for ANY math problem. Include ALL units*.

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| 1. Write the empirical formula for C2H6 | 1. Write the empirical formula for CH2O | 1. Write the empirical formula for CH3COOH | 1. Write the empirical formula for H2O |
| 1. Calculate % composition of each element in KNO3   *K = 38.67%, N = 13.86%, O= 47.48%* | | | |
| 1. Calculate % composition of each element in H2SO4   *H = 2.06%, S= 32.69%, O = 65.26%]* | | | |
| 1. Calculate % composition of each element in C6H5NH2     *C = 77.38%, H = 7.58%, N = 15.04%* | | | |
| 1. A compound is found to have (by mass) 48.38% carbon, 8.12% hydrogen and the rest oxygen. What is its empirical formula?   *C3H6O2* | | | |
| 1. A compound is found to have 46.67% nitrogen, 6.70% hydrogen, 19.98% carbon and 26.65% oxygen. What is its empirical formula?   *CH4N2O* | | | |
| 1. 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?   C6H6 | | | |
| 1. 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?   *C2H2* | | | |
| 1. 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?   *C3H12N6O3* | | | |