EMPIRICAL & MOLECULAR FORMULA PRACTICE (moles #8)

- Show all work.
- Circle all answers.
- Show units and check sig.figs.

EMPIRICAL FORMULA

1) What is the empirical formula for a compound which is 80.0% carbon and 20.0% hydrogen?

2) Calculate the empirical formula of a compound with 42.9% C and 57.1% O.

3) What is the empirical formula for a compound that has 38.8% C, 16.2% H, and 45.1% N?

4) What is the empirical formula for a compound that has 26.6% potassium, 35.4% chromium, and 38.1% oxygen?

5) What is the empirical formula of benzene, C_6H_6?

MOLECULAR FORMULA

6) Find the molecular formula of a compound if the GFM is 30.0 g/mol and the empirical formula is the same as the answer from question #1.

7) A compound's empirical formula is $C_6H_8O_7$. If the molar mass of the real compound (citric acid) is 192.0 g/mol, what is its molecular formula?

8) What is the molecular formula of a compound with empirical formula $C_3H_5O_2$ and a molar mass of 146.0 g/mol?

9) Find the molecular formula of a compound that has an empirical formula of CBr_2 and a GFM 515.4 of g/mol.

10) A compound has an empirical formula of $ClCH_2$ and a molecular mass of 98.96 g/mol. What is its molecular formula?