Unit 1 ➔ CHEMICAL QUANTITIES

EMPIRICAL AND MOLECULAR FORMULAS

1. What's the **empirical formula** of a molecule containing 85.6% carbon, 6.00% hydrogen, and 28.0% oxygen?
2. If the molar mass of the compound in problem 1 is 112 grams/mole, what's the **molecular formula**?

3. What's the **empirical formula** of a molecule containing 69.7% lithium, 24.3% carbon, and 45.9% oxygen?
4. If the molar mass of the compound in problem 3 is 73.8 grams/mole, what's the **molecular formula**?

5. The percentage composition of acetic acid is found to be 39.9% C, 6.7% H, and 53.4% O. Determine the **empirical formula** of acetic acid.
6. The molar mass for question #5 was determined by experiment to be 60 g/mol. What is the **molecular formula**?