

Section 11.4 *continued*

8. You know that the empirical formula of a compound has a molar mass of 30.0 g/mol. The experimental molar mass of this compound is 60.0 g/mol. What must you do to determine the value of n in the relationship between the molecular formula and the empirical formula?
- a. Add 30.0 g/mol and 60.0 g/mol. c. Divide 60.0 g/mol by 30.0 g/mol.
b. Divide 30.0 g/mol by 60.0 g/mol. d. Multiply 30.0 g/mol by 60.0 g/mol.
9. You know that the experimental molar mass of a compound is three times the molar mass of its empirical formula. If the compound's empirical formula is NO_2 , what is its molecular formula?
- a. NO_2 b. NO_6 c. N_3O_2 d. N_3O_6

Solve the following problem. Show your work in the space provided.

10. A sample of a compound contains 7.89 g potassium, 2.42 g carbon, and 9.69 g oxygen. Determine the empirical and molecular formulas of this compound, which has a molar mass of 198.22 g/mol.