Skill Practice 31

Moles and Formulas Practice

Name: _____

Date: _____

Hour: _____

1. What is the percent by mass of carbon in $Al_2(CO_3)_3$?

2. Find the percent composition of oxygen in each of the following compounds:
   a) Na_2O b) $Mg(NO_3)_2$

3. Find the percent composition of nitrogen in each of the following compounds.
   a) $(NH_4)_2O$ b) N_3O_5

4. What is the empirical formula of a compound that contains 25.9% nitrogen (N) and 74.1% oxygen (O) by mass?

5. What is the molecular formula of a compound that has an empirical formula of NO_2 and a molar mass of 138 g/mol?

6. A compound contains 64.3% carbon, 7.14% hydrogen and 28.6% oxygen. The molecular formula has a molecular mass of 448 amu.
   a) What is the empirical formula for this compound?

   b) What is the molecular formula for this compound?

7. A certain compound contains 26.35% C, 3.30% H and 70.35% O. If the molecular mass of this compound is 819 amu, what is the molecular formulas of the compound?