

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## MASS MOLE CONVERSION

Solve each of the following problems. Write answers on new paper.

Molar mass of a substance = mass of one mole of the substance

One mole of an element = the atomic mass of that element  
(from the periodic table)

One mole of a compound = the sum of the atomic masses of the  
atoms present in the compound

The units of molar mass are always grams per mole (g/mol).

1. What is the mass of one mole of  $\text{H}_2\text{O}$ ?
2. How many moles are in 5.9 g of  $\text{NaCl}$ ?
3. How many moles are in 22.5 g of  $\text{H}_2\text{O}$ ?
4. What is the mass of one mole of  $\text{NaCl}$ ?
5. What is the mass of one mole of  $\text{C}_2\text{H}_5\text{OH}$  (ethanol)?
6. What is the mass of one mole of  $\text{H}$ ?
7. How many moles are in 2.00 g of  $\text{NaCl}$ ?
8. How many moles are in 25.0 mL of  $\text{C}_2\text{H}_5\text{OH}$ ? The density of  $\text{C}_2\text{H}_5\text{OH}$  is 0.785 g/mL. (Hint: Use the formula: mass density  $\times$  volume.)
9. What is the mass of one mole of  $\text{Na}$ ?
10. How many moles are in 36.0g of  $\text{H}_2\text{O}$ ?