

Chemistry I

**Mass-Mole Conversion Handout**

Name \_\_\_\_\_

Date \_\_\_\_\_

Calculate the molecular mass for each of the following molecules:

1. KOH

2.  $N_2O_2$

3.  $Sr_3(PO_4)_2$

Convert each of the following from grams to moles:

4. 15.0 g  $C_2H_6$

5. 140.0 g NaOH

6. 27.2 g  $H_2O$

7. 45.7 g  $CaCO_3$

Convert moles to grams in each of the following:

8. 1.5 moles  $NH_3$

9. 0.65 moles  $H_2SO_4$

Convert the following to moles:

10.  $3.01 \times 10^{23}$  atoms Na

11.  $2.41 \times 10^{24}$  molecules  $CO_2$

Using Factor-Labeling, convert the following to atoms or molecules:

12. 2.56 moles Ca

13. 0.75 moles  $AlCl_3$

Using Factor-Labeling, find the following:

14. The number of grams in  $1.25 \times 10^{25}$  molecules of aluminum oxide.

15. The number of molecules in 115 g nitrogen dioxide.

How many moles of  $CO_2$  produced?

if you used 1 mole of  $CaCO_3$ , how many moles of  $CO_2$  can