

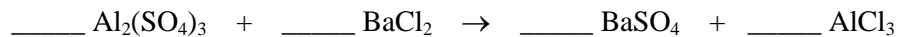
Name: \_\_\_\_\_

Period: \_\_\_\_\_

### Stoichiometry Exam Review

Problems: SHOW WORK TO RECEIVE CREDIT

1. According to the reaction below, what is the mole ratio of aluminum sulfate to aluminum chloride?



- a) 2:1      b) 1:2      c) 2:2      d) 3:2

2. From the same equation, what is the mole ratio between barium sulfate and aluminum chloride?

- a) 2:1      b) 1:2      c) 2:2      d) 3:2

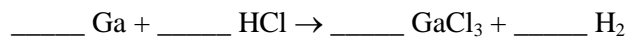
3. What conversion factor from the reaction below would you use to begin converting 4.56g of  $\text{N}_2$  to moles of  $\text{NH}_3$  produced?



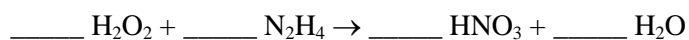
4. How many moles of  $\text{NH}_3$  may be produced from 1.20 moles of  $\text{N}_2$  assuming that hydrogen is excess.



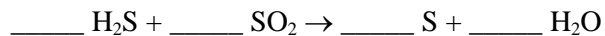
5. Calculate the number of moles of  $\text{H}_2$  produced from 0.78 moles Ga and 1.92 moles HCl?



6. How many moles of  $\text{H}_2\text{O}_2$  are required to react with 11.0 g of  $\text{N}_2\text{H}_4$  according to the following reaction?



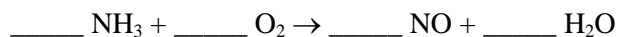
7. How many grams of S are formed at STP from the reaction of 6.80 g of H<sub>2</sub>S and 7.43 L SO<sub>2</sub> according to the following reaction?



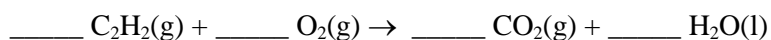
8. Thin films of silicon, used in fabrication of electronic components, may be prepared by the decomposition of silane. What mass (in g) of SiH<sub>4</sub> is required to prepare 0.2173 g of silicon?



9. The reaction of 0.68 g of NH<sub>3</sub> with excess O<sub>2</sub> according to the following reaction yields 0.98 g of NO. What is the percent yield?



10. A chemist combines 6.32 g of C<sub>2</sub>H<sub>2</sub> and 12.2 g of oxygen. How many grams of carbon dioxide are produced?



What is the limiting reactant? \_\_\_\_\_

How many grams excess reagent remain after the previous reaction? \_\_\_\_\_

Know the following terms:

stoichiometry  
percent yield  
actual yield  
theoretical yield  
gram formula mass

Law of Conservation of Mass  
excess reagent  
limiting reagent  
mol-mol ratio