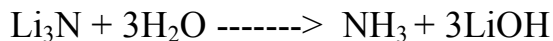


## STOICHIOMETRY/LIMITING REAGENT PRACTICE

## AP CHEMISTRY

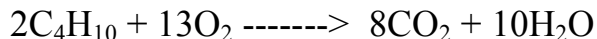
(practice, practice, practice. . . show all work (including balanced equations). . . the answers are on the back. . . the solutions are on the back wall. . . .)

1. Determine the mass of lithium hydroxide produced when 0.38 g of lithium nitride reacts with water according to the following equation:

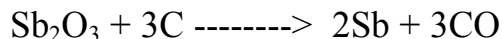


2. What mass of sodium chloride is produced when chlorine reacts with 0.29 g of sodium iodide?

3. Determine the mass of carbon dioxide produced when 0.85 g of butane reacts with oxygen according to the following equation:



4. Determine the mass of antimony produced when 0.46 g of antimony(III)oxide reacts with carbon according to the following equation:



5. What mass of hydrogen peroxide ( $\text{H}_2\text{O}_2$ ) must decompose to produce 0.77 g of water?

6. What mass of carbon monoxide must react with oxygen to produce 0.69 g of carbon dioxide?

7. Identify the limiting reagent when 65.14 g of  $\text{CaCl}_2$  reacts with 74.68 g of  $\text{Na}_2\text{CO}_3$  to produce  $\text{CaCO}_3$  and  $\text{NaCl}$  (show work!)

8. Identify the limiting reactant when 4.687 g of  $\text{SF}_4$  reacts with 6.281 g of  $\text{I}_2\text{O}_5$  to produce  $\text{IF}_5$  and  $\text{SO}_2$ .

9. If 4.1 g of Cr is heated with 9.3 g of  $\text{Cl}_2$ , what mass of  $\text{CrCl}_3$  will be produced?

10. What mass of  $\text{SO}_2$  is produced from the reaction between 31.5 g of  $\text{S}_8$  and 8.65 g of  $\text{O}_2$ ?

11. What mass of  $\text{SO}_3$  is produced from the reaction of 12.4 g of  $\text{SO}_2$  and 3.45 g of  $\text{O}_2$ ?

12. What mass of  $\text{H}_2\text{SO}_4$  is produced from the reaction of 6.58 g of  $\text{SO}_3$  and 1.64 g of  $\text{H}_2\text{O}$ ?

13. What mass of  $\text{CdS}$  is produced if 8.47 g of cadmium reacts with 2.51 g of sulfur?

ANSWERS:

(YOU'RE NOT ACTUALLY GOING TO LOOK AT THESE UNTIL YOU ARE DONE WITH ALL OF YOUR PRACTICE PROBLEMS, SHOWING ALL OF YOUR WORK. . . .RIGHT!!!!???)

1. 0.78 g of LiOH

2. 0.11 g NaCl

3. 2.6 g CO<sub>2</sub>

4. 0.38 g Sb

5. 1.4 g H<sub>2</sub>O<sub>2</sub>

6. 0.44 g CO

7. CaCl<sub>2</sub>

8. SF<sub>4</sub>

9. 12 g CrCl<sub>3</sub>

10. 17.3 g SO<sub>2</sub>

11. 15.5 g SO<sub>3</sub>

12. 8.06 g H<sub>2</sub>SO<sub>4</sub>

13. 10.9 g CdS