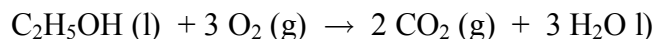


REVIEW QUESTIONS

Chapter 3

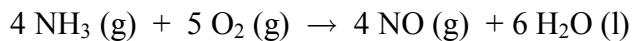
1. What mass of chlorine is present in 12.2 g of  $\text{PbCl}_2$ ?
2. How many atoms of oxygen are present in 2.15 g of  $\text{Ca}_3(\text{PO}_4)_2$ ?
3. What is the percent composition of caffeine ( $\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$ )?
4. Determine the empirical formula for a compound with the following composition:  
62.1% C            5.21% H            12.1% N            20.7% O

5. The alcohol in “gasohol” burns according to the equation shown below:



How many grams of  $\text{CO}_2$  are produced when 3.00 g of  $\text{C}_2\text{H}_5\text{OH}$  burns according to this reaction? (Assume excess oxygen)

6. How many grams of  $\text{NO}$  form when 1.50 g  $\text{NH}_3$  react with 1.85 g of  $\text{O}_2$  as shown below:



7. When 30.0 g of benzene ( $\text{C}_6\text{H}_6$ ) and 65.0 g of bromine are reacted together as shown below, 56.7 g of bromobenzene ( $\text{C}_6\text{H}_5\text{Br}$ ) is formed. What is the percent yield of this reaction?

