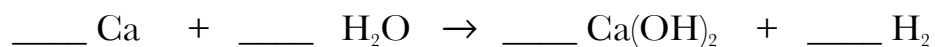


**Stoichiometry Test Review**

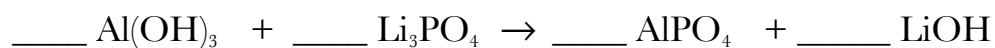
**A. The Mole House.** Draw the mole house in the space below:

## 1. Gram-Gram Problem



How many grams of hydrogen gas could you make if you started with 5.89 grams of calcium metal and had more than enough water?

## 2. Limiting Reactant Problem

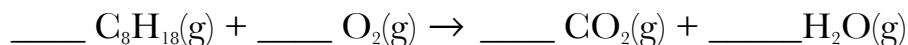


If you started with 10.00 grams of  $\text{Al(OH)}_3$  and 10.00 grams of  $\text{Li}_3\text{PO}_4$

a. Which would be the limiting reactant?

b. How much lithium hydroxide ( $\text{LiOH}$ ) would you be able to make?

3. Gas Stoichiometry (assume conditions are at STP)



a. How many liters of carbon dioxide could you make if you burned 12.4 L of octane?

b. How many grams of water could you make with 100.0 L of octane?

4. Mole House Problems (use the octane equation in problem # 3)

a. How many molecules of octane would it take to make 1.00 L of carbon dioxide gas?

b. How many grams of water can be made with  $1.23 \times 10^{45}$  molecules of octane?

c. How many moles of oxygen gas would you need to burn 150. moles of octane?

5. Fe to Cu Lab: In a lab just like the one we did in class you collected the following data:

Empty Beaker	Beaker + CuCl	Nails Before	Nails After	Beaker + Cu
95.38 g	99.87 g	4.77 g	3.52 g	98.32g

The balanced equation for the reaction is  $\text{Fe} + 2\text{CuCl} \rightarrow 2\text{Cu} + \text{FeCl}_2$

a. How many grams of Cu should have been made?

b. How many grams of Cu were actually made, and what was the percent yield?

c. Starting with the Cu that was actually made, how many grams of Fe should have been lost?

b. How many grams of Fe were actually lost, and what was the percent yield?