

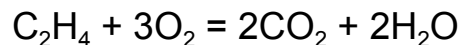
# Stoichiometry Practice 3

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

**STUDENT NOTE:** As I have discussed in chemistry several times, you **MUST** work outside of class time. This is a class that requires you to work out of class. Waiting until the last minute is not beneficial in this class.

**Directions:** Complete these three stoichiometry practice problems. These three problems are due at the **START** of next class. You may write the answers on a sheet of paper or you may print out this paper (at home) and complete the assignment.

1. Ethylene (C<sub>2</sub>H<sub>4</sub>) burns in excess oxygen to form carbon dioxide and water vapor.



a. If 35 grams of C<sub>2</sub>H<sub>4</sub> is reacted with 20 grams of O<sub>2</sub>, how many grams of water will be produced?

**HINT:** You are going from grams of one substance to grams of a totally different substance. This means you are going to complete a 3-step conversion. You know on the test I will not tell you how many conversion steps need to take place.

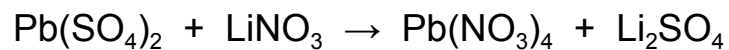
b. How many liters of water can be formed if 1.25 liters of ethylene are consumed in this reaction?

**HINT:** We did practice stoichiometry using mixed units. Time to practice it again. Ask yourself, what are you being required to do? You are going from liters of one substance of a totally different substance. This means you are going to complete a 3-step conversion. Think about the facts you know -- 22.4 L/1 mole. You know on the test I will not tell you how many conversion steps need to take place.

c. If 35 grams of C<sub>2</sub>H<sub>4</sub> is reacted with 20 grams of O<sub>2</sub>, how many grams of carbon dioxide will be Produced?

**HINT:** You are going from grams of one substance to grams of a totally different substance. This means you are going to complete a 3-step conversion. You know on the test I will not tell you how many conversion steps need to take place.

2. Balance the equation below BEFORE answering parts a, b, and c.



a. How many moles of lithium nitrate will be needed to make 40 moles of lithium sulfate? Assume you have an adequate amount of lead(IV) sulfate to complete the reaction.

b. How many moles of lead(IV) nitrate are produced if 25 moles of lithium sulfate are produced?

c. You have 10.2 grams of lead(IV) sulfate and 7.6 grams of lithium nitrate. What is the limiting reagent?

HINT: It doesn't matter which product you select in the balanced equation to find the limiting reagent.

d. How many grams of lithium sulfate will you make?