

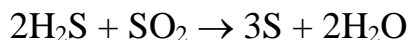
Ch3/ PowerPoint Study-3 Stoichiometry – Introduction Name:

Answer these questions as you are watching the videos. They are due in class.

These questions are not just for you to answer but also to prepare you for the exam.

*Make sure you understand what you are writing and not just copy from the text book. **Show all work.***

How many grams of sulfur can be produced from 2 mols of sulfur oxide? The equation is given below:



- a) Is the equation balanced? Yes/No
- b) Do you need the grams of sulfur dioxide? Yes/No
- c) What is the mol ratio of sulfur dioxide to sulfur? _____
- d) How many mols of sulfur will be formed from 2 mols of sulfur dioxide? _____
- e) How many grams of sulfur are formed from the 2 mols of sulfur oxide? Set up dimensional analysis format for full stoichiometric setup.

Complete the following sentence with the information above.

2 mols of sulfur dioxide, will produce _____ mol of sulfur, which is _____ g of sulfur (theoretical yield).

A Second Scenario: Using the equation given above, try another problem.

How many grams of water will be formed when 3.00 g of sulfur are formed?

- f) How many mols are in 3.00 g of sulfur?
- g) What is the mol ratio of sulfur to water? _____
- h) How many grams of water are produced? Do the dimensional analysis format for full stoichiometric setup.

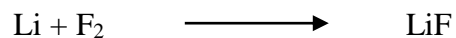
Complete the following sentence with the information above.

3.00 g sulfur, which is _____ mol of sulfur, will produce _____ g of water (theoretical yield)

Stoichiometric Calculation – This is what a question looks like in the exam.

Do these problems using the dimensional analysis full setup instead of step by step.

Lithium is reacted with fluorine to form lithium fluoride as in the equation below.



- 1) How much lithium fluoride is made when 15.0 g of fluorine is used?

(Strategy: a) check if the equation is balanced. If not, then balance it.

b) convert 15 g $\text{F}_2 \rightarrow \text{mol } \text{F}_2 \rightarrow \text{mol ratio of LiF} \rightarrow \text{g of LiF}$

- 2) How much lithium is required to react with 23.2 g of fluorine? (follow the same strategy as above)