

SHOW ALL WORK!!!!

1. Given the reaction,



to produce 0.800 moles of $\text{H}_2\text{O}_{(l)}$:

a.) how many moles of $\text{H}_{2(g)}$ are needed?

b.) how many liters of $\text{O}_{2(g)}$ are needed?

2. For the reaction,



how many moles of SO_3 liquid will be formed reacting with 3.1973×10^{20} molecules of $\text{O}_{2(g)}$?

3. If the following reaction occurs,



how many grams of barium chloride will be needed to react with 376 grams of aluminum sulfate?

4. If the following reactions occurs,



How many grams of aluminum hydroxide are produced along with 16.0 liters of CH_4 ?

5. If 68.0 liters of oxygen are consumed when a candle made from paraffin ($C_{25}H_{52}$) is burned, what volume of carbon dioxide is produced? (Water is the other product.)

6. In a double replacement reaction, when 6.52 grams of barium hypophosphite reacts with 6.52 g of silver peroxalate, what mass of silver compound is produced?

What reactant, and what mass of it, is in excess?