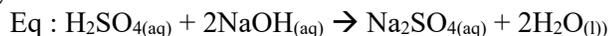


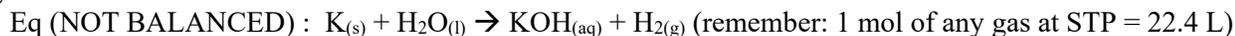
ASSIGNMENT 7: Problems in Stoichiometry

Print this page out and be sure to show all your work.

1. How many grams of hydrogen sulfate (sulfuric acid) are needed to completely neutralize 10.0 g of sodium hydroxide?



2. How many liters of hydrogen gas at STP are produced if the following reaction forms 5.00g of potassium hydroxide?



3. How many grams of calcium oxide are needed to combine with 10.0g of water?

Hint: This is a synthesis reaction involving a metal oxide and water.

4. How many grams of zinc chloride are produced when 2.00 g of zinc reacts with an excess of hydrochloric acid?

5. How many liters of hydrogen gas are formed at STP from the reaction in #4?

6. How many grams of carbon dioxide are produced when 13.0g of sodium carbonate are decomposed with heat?

7. How many grams of silver nitrate are needed to produce 10.0 grams of silver chloride in the reaction between silver nitrate and sodium chloride?

8. How many grams of potassium permanganate are needed to completely react with 100.0 g of Iron (III) and excess hydrochloric acid?



Answers:

1. 12.3 g H₂SO₄

2. 0.998 L H₂

3. 31.1 g CaO

4. 4.17 g ZnCl₂

5. 0.685 L H₂

6. 5.40 g CO₂

7. 11.9 g AgNO₃

8. 169.8 g KMnO₄