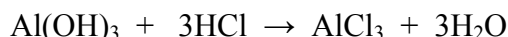


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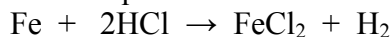
Stoichiometry

- 1) If 5.32 grams of aluminum hydroxide are consumed according to the following equation, then how many moles of hydrochloric acid were used?



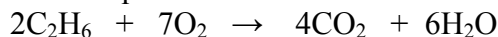
- 2) How many grams of carbon dioxide will be produced from the combustion of 4.20L of propane gas (C_3H_8) at STP?
- 3) How many atoms of oxygen are required to react with magnesium in order to create 1.42g of magnesium oxide?
- 4) Determine how many molecules of carbon dioxide will be produced if 4.82×10^{14} molecules of glucose is converted alcohol by the following equation.
- $$\text{C}_6\text{H}_{12}\text{O}_6 \rightarrow 2\text{C}_2\text{H}_5\text{OH} + 2\text{CO}_2$$
- 5) How many grams of sulfur are needed to create 0.862mL of sulfur dioxide gas at STP from a reaction with oxygen?

Use the following equation to answer questions 6-10:



- 6) If 5.82L of hydrogen gas was created at STP, then how many atoms of iron were consumed?
- 7) How many formula units of iron (II) chloride were created from 8.34g Fe?
- 8) If the density of HCl is 1.19g/mL, then how many milliliters of acid are needed to create 6.24g of FeCl_2 ?
- 9) How many formula units of HCl are necessary to produce 1.85×10^{22} atoms of hydrogen in the hydrogen gas at STP?
- 10) How many moles of iron (II) chloride will be produced if 6.3 moles of hydrochloric acid were consumed?

Use the following equation to answer questions 11-15:



- 11) How many liters of oxygen gas at STP are required to fully react 58.3g of C_2H_6 ?
- 12) How many liters of carbon dioxide had been released if 6.32L of oxygen were consumed at STP?
- 13) How many atoms of oxygen are required to produce 4.88×10^{20} molecules of CO_2 ?
- 14) If 14.2g of CO_2 were created, and the water vapor was condensed, then how many milliliters of water would you expect to collect?
- 15) How many atoms of carbon were involved in the reaction if 2.58grams of C_2H_6 were consumed?