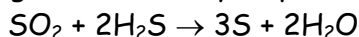


Chapter 11: Liter-to-Liter Conversions

Name: _____

Stoichiometry

- 1) What volume of sulfur dioxide gas is necessary to produce 11.4 L of water vapor?

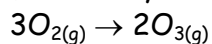


5.7 L

- 2) When 2.75 L of oxygen react with glucose, according to the reaction below, what volume of carbon dioxide will be produced? $6\text{O}_{2(g)} + \text{C}_6\text{H}_{12}\text{O}_{6(s)} \rightarrow 6\text{H}_2\text{O}_{(g)} + 6\text{CO}_{2(g)}$

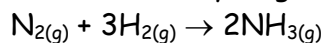
2.75 L

- 3) If 500 L of ozone (O_3) are produced, how many liters of oxygen (O_2) are required?



750 L

- 4) If an excess of nitrogen gas reacts with 25.0 L of hydrogen gas, how many L of ammonia will be produced?



16.67 L

Liter/Gram Conversions

- 5) From the equation given, $2\text{NaN}_3 \rightarrow 2\text{Na} + 3\text{N}_2$, what volume (in L) of N_2 gas is produced when 175 g of sodium forms at STP?

255.76 L

- 6) An automobile airbag inflates when N_2 gas is released from the decomposition of sodium azide according to the equation: $2\text{NaN}_3 \rightarrow 2\text{Na} + 3\text{N}_2$. Calculate the mass of NaN_3 required to produce 50.0 L of N_2 gas at STP.

96.69 g