Extra Practice Stoichiometry Problems

1. Ethane reacts with oxygen producing carbon dioxide and water. How many moles of oxygen are required to react with 4.50 mol of ethane?

2. Nitrogen monoxide reacts with oxygen to produce nitrogen dioxide. What mass (in grams) of nitrogen dioxide is formed when nitrogen monoxide reacts with 384 g of oxygen?

3. Hydrogen sulfate reacts with sodium bicarbonate to produce carbon dioxide, sodium sulfate, and water. How many moles of sodium bicarbonate would be needed to react with 150.0 g of hydrogen sulfate?

4. Sodium hydroxide reacts with hydrogen sulfate to create sodium sulfate and water. What mass (in grams) of hydrogen sulfate would be required to react with 0.75 mol of sodium hydroxide?

5. How many moles of lithium chloride will be formed by the reaction of chlorine with 0.064 mol of lithium bromide? The other product is bromine.

6. Phosphorus burns in oxygen to form solid tetraphosphorus decoxide. What mass (in grams) of phosphorus will be needed to produce 3.25 mol of tetraphosphorus decoxide?

7. Sodium carbonate reacts with hydrogen nitrate to form sodium nitrate, carbon dioxide, and water. If 7.50 g of sodium carbonate reacts, how many moles of carbon dioxide are produced?

8. Silver nitrate reacts with magnesium bromide to produce silver bromide and magnesium nitrate. Calculate the mass (in grams) of silver bromide produced from 25.5 g of silver nitrate.