

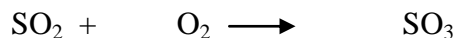
Stoichiometry Practice Problems

Name:

1. How many moles of sodium bromide could be produced from 0.172 moles of bromine, based upon the following equation:



2. How many moles of oxygen would be needed to produce 79.60 moles of sulfur trioxide, based upon the following equation:



3. Calculate the volume occupied by 16.3 moles of nitrogen gas at STP.

4. How many moles of fluorine gas are contained in a 0.269 L container at STP?

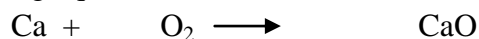
5. Find the volume of nitrogen dioxide gas that could be produced from 71.11 L of nitrogen gas according to the following chemical equation (assume all gases are at STP):



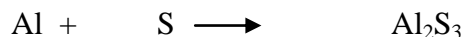
6. What volume of oxygen difluoride is needed to produce 1.54 L of hydrogen fluoride gas according to the following chemical equation (assume all gases are at STP):



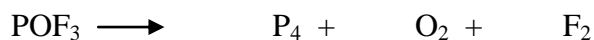
7. How many formula units of calcium oxide can be produced from 4.9×10^5 molecules of oxygen gas, based upon the following equation:



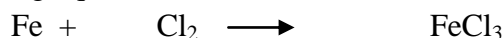
8. How many atoms of aluminum will react with 1.33×10^{24} atoms of sulfur, based upon the following equation:



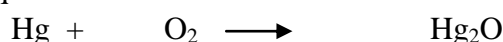
9. What volume of fluorine gas at STP could be produced by the decomposition of 9.22×10^{25} molecules of phosphorus oxyfluoride, based upon the following equation:



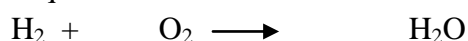
10. Calculate the volume of chlorine gas at STP that will be needed to react with 7.15×10^{23} atoms of iron, based upon the following equation:



11. Determine the mass of mercury needed to produce 29.8 g of mercury (I) oxide, according to the following chemical equation:



12. How many grams of water will be produced if 1.18 g of hydrogen gas reacts with oxygen, according to the following chemical equation:



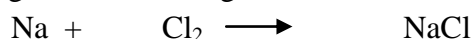
13. What volume of chlorine gas at STP can be produced by the decomposition of 73.0 g of hydrogen chloride, given the following reaction:



14. Find the number of grams of sulfur that can be produced when 1.87 L of oxygen gas at STP is also produced when sulfur trioxide decomposes, given the following reaction:



15. How many formula units of sodium chloride will be produced by the reaction of 40.3 g of chlorine gas with sodium, according to the following reaction:



16. How many atoms of silver are need to react with 531.8 g of iodine to produce silver iodide, according to the following reaction:

