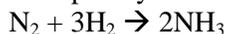


Stoichiometry Practice Problems

Mole-Mole

1. How many moles of hydrogen are needed to completely react with 2 moles of nitrogen?



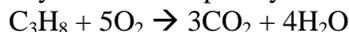
2. How many moles of oxygen are produced by the decomposition of six moles of potassium chlorate?



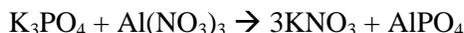
3. How many moles of hydrogen are produced from the reaction of three moles of zinc with an excess of hydrochloric acid?



4. How many moles of oxygen are necessary to react completely with four moles of propane (C₃H₈)?

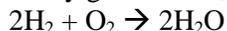


5. How many moles of potassium nitrate are produced when two moles of potassium phosphate and excess aluminum nitrate?

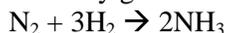


Mole-Mass

6. If 5.2 moles of H₂ react with excess O₂ how many grams of H₂O are produced?



7. If 0.37 moles of N₂ reacts with excess H₂, how many grams of NH₃ will be produced?



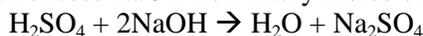
8. How many grams of CO would be needed to completely react with 3.4 moles of O₂ to form CO₂?



9. If 12.3 grams of Zn react with excess HCl, how many moles of H₂ would be produced?



10. If 125.33 grams of H₂SO₄ react with excess NaOH how many moles of Na₂SO₄ would be produced?



Mass-Mass

11. How many grams of potassium chloride are produced if 25.0 g of potassium chlorate decompose?



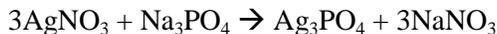
12. If 13.0 grams of aluminum chloride decompose, how many grams of chlorine will be produced?



13. When 34.34 grams of hydrochloric acid react with excess magnesium how much magnesium chloride will be produced?



14. How many grams of silver nitrate will be needed to completely react with 120.21 grams of sodium phosphate to produce silver phosphate and sodium nitrate?



15. If excess potassium hydroxide is present, how many grams of iron (III) chloride would be needed to react with potassium hydroxide to produce 89.13 grams of potassium chloride?



Mole to volume (assume all the volume problems are at STP)

16. If 3.8 moles HCl reacts with excess zinc, how many liters of hydrogen gas was produced?

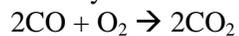


17. If 43.22L of oxygen gas was produced, how many moles of KClO₃ decomposed?

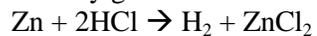


Mass to volume (assume all the volume problems are at STP)

18. If 17.22g of CO reacted with excess oxygen, how many liters of CO₂ is produced?



19. If 65.32L of hydrogen gas was produced, how many grams of zinc was needed to react?



20. If 234.22g KClO₃ breaks down to produce how many liters of oxygen gas?

