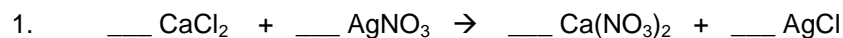


Name: _____

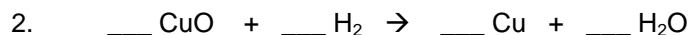
Hour: _____ Date: _____

Chemistry: Stoichiometry – Problem Sheet 2

Directions: Solve each of the following problems. Show your work, including proper units, to earn full credit.



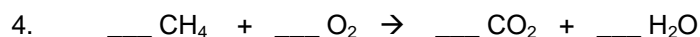
How many grams of silver chloride are produced when 45 g of calcium chloride react with excess silver nitrate?



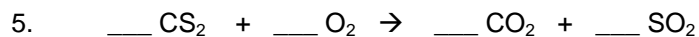
At STP, how many liters of hydrogen are needed to react with 88 g of copper (II) oxide?



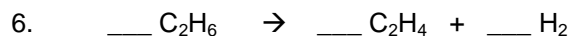
If 3 liters of hydrogen (at STP) are produced in the above reaction, what mass of sodium was used?



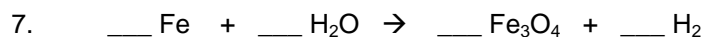
What volume of methane is needed to completely react with 500 liters of oxygen?



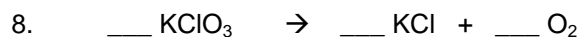
How many molecules of carbon disulfide will react with 4.21×10^{19} molecules of oxygen?



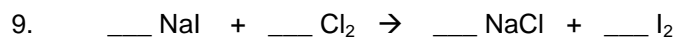
If 5.76×10^{28} molecules of ethane are broken down, what volume of hydrogen gas is produced at STP?



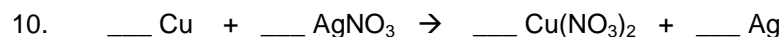
If 67.8 dm^3 of hydrogen are produced at STP, how many atoms of iron were used in the reaction?



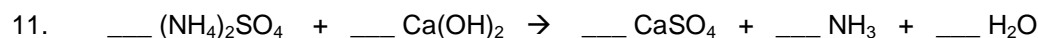
If 8.65×10^{25} molecules of potassium chloride are produced, what mass of oxygen is produced?



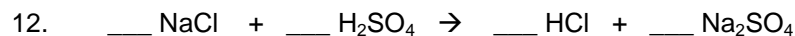
How many molecules of iodine are liberated if 546 g of chlorine react with excess sodium iodide?



How many grams of silver will be produced if 86 g of copper are used?



At STP, how many dm^3 of ammonia are produced by using 26.0 g of calcium hydroxide?



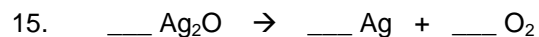
If 359 g of sodium chloride are consumed in the reaction, how many molecules of sodium sulfate are produced?



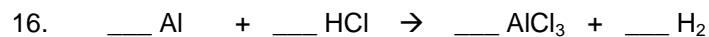
What mass of AgCH_3COO will react with 4.77×10^{26} molecules of sodium phosphate?



What mass of mercury (II) oxide is required to produce 812 liters of oxygen (at STP)?



How many molecules of silver oxide are needed to produce 445 dm^3 of oxygen (at STP)?



How many liters of hydrogen (at STP) are produced by reacting 3.54×10^{24} atoms of aluminum with excess hydrochloric acid?

- Answers:
- | | | | |
|------------------------|--|---|---|
| 1. 116 g AgCl | 5. 1.40×10^{19} molecules CS_2 | 9. 4.63×10^{24} molecules I_2 | 13. 3.97×10^5 g AgCH_3COO |
| 2. 24.8 L H_2 | 6. 2.14×10^6 L H_2 | 10. 292 g Ag | 14. 1.57×10^4 g HgO |
| 3. 6.2 g Na | 7. 1.37×10^{24} atoms Fe | 11. 15.7 dm^3 NH_3 | 15. 2.39×10^{25} molecules Ag_2O |
| 4. 250 L CH_4 | 8. 6897 g O_2 | 12. 1.85×10^{24} molecules | 16. 198 L H_2 |