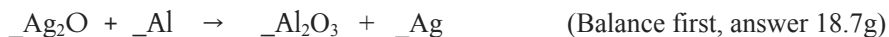


Chemistry Review Questions

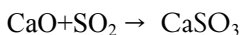
Serin Jo

1. Shanequa wants to make baking soda, (NaHCO₃). But in order to do so, she must figure out the percentage composition of Oxygen. What is the Percentage composition of Oxygen in the baking soda? (answer: 57.1 %)

2. To make a spoon, Shakira wants to know much Aluminium metal is required to replace all of the Silver from 120.6 g of Silver Oxide?

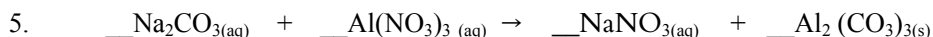


3. 33.0 g of Calcium Oxide is added to 27.0 g of Sulfur Dioxide to create Calcium Sulfite



- What is the Limiting Reactant? (SO₂)
- What is the maximum number of grams of Calcium Sulfite that can be produced? (50.6 g)

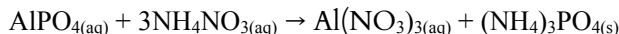
4. To unclog the sink, 10.5 g of Sodium Hydroxide is dissolved in water to make 80.0 ml of solution. What is the concentration of the final solution? (answer: 3.28 mol/L)



- Balance the equation
- Write the total Dissociated equation
- Write the net ionic equation

6. 30.0 ml of NH_{3(aq)} with a concentration of 16.0 mol/L was diluted in water to a total volume of 200.0 ml
(a) what was the concentration of the final diluted solution (b) how much water was added? (answer: 2.4 mol/L)

7. 30.0 ml of Aluminium Phosphate with a concentration of 0.625mol/L and 21.3 ml of Ammonium Nitrate with a concentration of 0.435mol/L are reacted.



- Determine the mass of the precipitate (answer: 2.43g)
- 0.934 of precipitate was obtained during an experiment. Calculate the percentage yield (answer:38.4%)
- Calculate the mass of excess reactant remaining
- Concentration of Aluminium ion in final solution(0.365mols/L)

8. A public bath in Rome has a hydroxide ion concentration of 2.25×10^{-6} mol / L. The inspectors need to calculate the following:

- pH?(5.65)
- pOH?(8.35)
- [OH?](4.00×10^{-9})
- Is it an Acid or base? (acid)

9. What volume of Chlorine gas is required to make it have pressure of 150 kPa, 40.3 mol, and temperature of 4.00 C degrees?(Remember that $V = nRT/P$, $R = 8.314$ (answer:610L)

10. Calculate the number of sig.figs. for the following.

- 0.025 (2)
- 0.04305 (4)
- 10.0 (3)
- 46000 (2)
46000. (5)