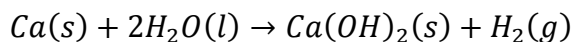


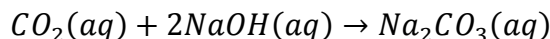
Practice Test Questions 1

Math and Stoichiometry Review

- 1 mL = 1 cm³
How many liters are in 1 m³?
- A 125 mL flask contains 75 kPa Cl₂ at 22 °C.
 - How many moles of Cl₂ are in the flask?
 - What mass of Cl₂ is in the flask?
- The density of pure ethanol (C₂H₅OH) is 0.789 g/mL at room temperature. Calculate the number of hydrogen atoms in 1.00 L of ethanol.
- If 6.25 grams of calcium metal are added to 2 liters of water, what mass of hydrogen gas is produced?

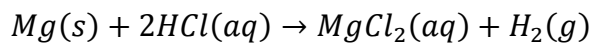


- Club soda is an aqueous solution of carbon dioxide. A sample of club soda is titrated with 0.04202 M NaOH_(aq) according to the reaction equation below:



If it takes 32.14 mL of 0.04202 M NaOH_(aq) to react with a 25.00 mL sample of club soda, what is the concentration of CO₂ in club soda (*in g/L*)?

- A piece of magnesium with a mass of 185 mg is dropped into a beaker containing 75 mL of 1.25 M HCl_(aq):



Once the reaction is complete, what is the concentration of HCl_(aq) remaining in the beaker? Assume that the volume of solution does not change.