1. When the molarity of 150mL of an aqueous calcium chloride solution is 0.895M, how many grams of the solute are present?
2. What is the molarity of a solution made by adding 0.500g of sodium hydroxide to enough water to make 200mL of solution?
3. Explain in detail how to make 100mL of a 2M solution of phosphoric acid from a stock solution of 14.8M phosphoric acid.
4. What is the m/v% of a 0.438M solution of silver nitrate?
5. How many mL of water are actually in 175mL of 95%(v/v) of ethyl alcohol?
6. If the molality of an aqueous solution of aluminum chloride is 0.270m, how many grams of alumninum chloride are present in 150mL of water? (Assume that the density of water is 1.00g/mL.)
7. Determine the mole fractions of both the alumninum chloride and the water from #6.

Answers

1. 14.9g of calcium chloride
2. 0.0625M sodium hydroxide
3. 13.5mL of 14.8M H_3PO_4 will be added to a 100-mL volumetric flask, and water will be added to the etched line.
4. 7.44%(m/v)
5. 8.75mL water
6. 5.40g aluminum chloride
7. mole fraction of aluminum chloride is 0.00484
    mole fraction of water is 0.995

1. What is the molarity of 250mL of an aqueous solution containing 10.0g of potassium dichromate?
2. How many grams of sodium hydroxide are needed to make 100mL of a 2.5M solution of sodium hydroxide?
3. Explain in detail how to make 150mL of a 6M solution of nitric acid from a stock solution of 15.6M nitric acid.
4. What is the m/v% of a .055M solution of copper(II) sulfate?
5. How many mL of water are actually in 150mL of 70%(v/v) of isopropyl alcohol?
6. What is the molality of a solution made by adding 3.25g of magnesium chloride to 200mL of water? (Assume that the density of water is 1.00g/mL.)
7. How many grams of iron(III) oxide are present in a 0.274m solution made with 15.0g of water?
8. Determine the mole fractions of both the iron(III) oxide and the water from #7.

Answers
1. 0.136M potassium dichromate
2. 10.0g sodium hydroxide
3. check with me...
4. 0.878%(m/v) copper(II) sulfate
5. 45mL water
6. 0.171m magnesium chloride
7. 0.656g iron(III) oxide
8. mole fraction of iron(III) oxide = 0.00491
   mole fraction of water = 0.995