-If it requires 23.2mL of .13M potassium hydroxide to titrate 50.0mL of acetic acid to its equivalence point, what is the molarity of the acid? Write a net ionic equation for this reaction.

-Determine the final molarity of a solution produced by combining 200.mL of .15M HCl with an additional 275mL of water. Assume volumes are additive.

-Determine the volume (in mL) of .60M LiOH required to produce 700.mL of a .15M solution.

-In an attempt to produce 500.mL of a .100M lithium hydroxide solution, a student dissolves 2.00g of lithium hydroxide in enough water to produce 500.mL. Is the solution of the correct molarity? If not, what needs to be done to produce the correct solution? The molar mass of LiOH is 23.948g/mol.

-If 25.0mL of .200M sodium chloride is combined with 30.0mL of a .15M silver sulfate, how many grams of insoluble product is formed? What is the identity of the precipitate? Write a net ionic equation for this reaction.

If it requires 23.2mL of .13M potassium hydroxide to titrate 50.0mL of acetic acid to its equivalence point, what is the molarity of the acid? Write a net ionic equation for this reaction.

Answer:
.060M
$HC_2H_3O_{2(aq)} + OH^-_{(aq)} \rightarrow H_2O_{(l)} + C_2H_3O_2^-{}_{(aq)}$

Determine the final molarity of a solution produced by combining 200.mL of .15M HCl with an additional 275mL of water. Assume volumes are additive.

Answer:
.063M

Determine the volume (in mL) of .60M LiOH required to produce 700.mL of a .15M solution.

Answer:
Take 175mL of .60M solution and add water to the 700mL mark.

In an attempt to produce 500.mL of a .100M lithium hydroxide solution, a student dissolves 2.00g of lithium hydroxide in enough water to produce 500.mL. Is the solution of the correct molarity? If not, what needs to be done to produce the correct solution? The molar mass of LiOH is 23.948g/mol.

Answer:
mol LiOH 2.00g / 23.948g/mol = .084mol / .500L = **.17M**
$(.17M)(V_1) = (.10M)(500.mL)$
V_1 = 299mL, fill with H_2O to 500.mL

If 25.0mL of .200M sodium chloride is combined with 30.0mL of a .15M silver sulfate, how many grams of insoluble product is formed? What is the identity of the precipitate? Write a net ionic equation for this reaction.

Answer:
$2NaCl_{(aq)} + Ag_2SO_{4(aq)} \rightarrow 2AgCl_{(s)} + Na_2SO_{4(aq)}$
(.025L)(.200M) = .0050mol (.030L)(.15M) = .0045mol (.0050mol)(143.321g/mol) = **.717g AgCl**
Silver chloride is the insoluble product

$2Cl^-_{(aq)} + 2Ag^+_{(aq)} \rightarrow 2AgCl_{(s)}$
$Ag^+_{(aq)} + Cl^-_{(aq)} \rightarrow AgCl_{(s)}$