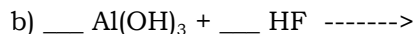


## Titration and Neutralization

Name: \_\_\_\_\_

1) Complete and balance the following neutralization reactions.

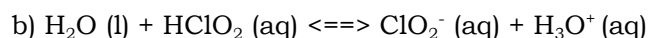
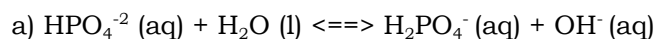
2) 23.6 mL of KOH is used to neutralize 500 mL of 0.0250 M  $\text{HNO}_3$ . What is the molarity of the base?

3) What volume of 0.78 M acid is necessary to neutralize 19.0 mL of 1.2 M base?

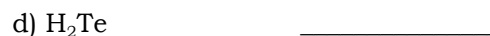
4) 4.23 g of sodium hydroxide are dissolved in 750 mL of water. If we wanted to neutralize the solution with 2.00 M HCl, how many mL of HCl solution would be needed

5) In a titration, a 0.150 M solution of acetic acid is used to neutralize 43.0 mL of 0.215 M silver (I) hydroxide solution ( $\text{AgOH}$ ). What is the volume of the acetic acid will need to be used?

6) In each of the following chemical reactions, label the acid, base, conjugate acid and conjugate base.



7) Write names for the following acids and bases:



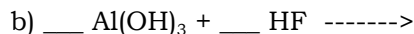
Answers: 2) 0.530 M      4) 52.9 mL

Adv Chem

## Titration and Neutralization

Name: \_\_\_\_\_

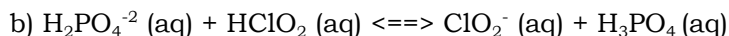
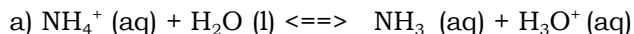
1) Complete and balance the following neutralization reactions.

2) How many mL of 1.5 M LiOH are needed to neutralize 24.0 mL of a solution of 0.85 M  $\text{HNO}_3$ ?3) 13.0 g of  $\text{HClO}_3$  has been dissolved to 200 mL of solution. If 22.4 mL of KOH was needed to neutralize all the acid, what was the concentration of the base?

4) 24.3 g of potassium hydroxide are dissolved to 75 mL of solution. If we wanted to neutralize the solution with 3.00 M HCl, how many mL of HCl solution would be needed?

5) 19.6 g of RbOH is dissolved in 100 mL of solution. 42.6 mL of unknown molarity  $\text{HClO}_3$  solution is added to neutralize. What mass of  $\text{HClO}_3$  would be in the solution to neutralize?

6) In each of the following chemical reactions, label the acid, base, conjugate acid and conjugate base.



7) Write names for the following acids and bases:



Answers: 3) 6.87 M      5) 16.2 g

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