

Work each of the following problems. Show all work (where applicable.)

1. Give the word equation for the neutralization reaction of an acid and a base.

2. Complete these equations: $\text{HCl} + \text{LiOH} \rightarrow$ _____



3. A _____ is a laboratory method used to determine the concentration of an acid or a _____ in solution by performing a _____ reaction with a standard solution.

4. At the _____ of the titration, the indicator changes color, which indicates neutralization. Once neutralized, moles of _____ and moles of _____ are equal.

5. In a titration of HCl with NaOH, 100.0 mL of the base was required to neutralize 20.0 mL of 5.0 M HCl. What is the molarity of the NaOH? (Be sure to write the neutralization reaction.)

6. In a titration of H_2SO_4 with NaOH, 60.0 mL of 0.020 M NaOH was needed to neutralize 15.0 mL of H_2SO_4 . What is the molarity of the acid? (Be sure to write the neutralization reaction.)

6. If 10.0 mL of 0.300 M KOH are required to neutralize 30.0 mL of gastric juice (HCl), what is the molarity of the gastric juice?