

1. Name these Acids:

HI _____

H₂SO₃ _____

HNO₃ _____

H₃PO₄ _____

2. Write formulas for these acids:

hydrofluoric acid: _____

phosphorous acid: _____

3. Name these bases and salts:

KOH _____

MgSO₄ _____

4. Calculate the pH of a 1.4 x 10⁻² M NaOH solution

5. Calculate the [H⁺] of a solution with pH = 3.2

6. Calculate the [OH⁻] of a solution with a [H⁺] of 9.3 x 10⁻⁴ M

7. In a titration, 25.0 mL of a 0.20 M NaOH solution is used to neutralize 10.0 mL of HCl.

a) Write the equation for this neutralization reaction:

b) Calculate the molarity of the acid:

8. In a titration, 24.2 mL of 0.120 M $\text{Mg}(\text{OH})_2$ were required to neutralize 33.1 mL of H_3PO_4 .

a) Write the equation for this neutralization reaction:

b) What is the molarity of the acid?

9. What is the word equation for the neutralization of a strong acid and strong base? _____

10. In a neutral solution, moles of _____ equal the moles of _____.

11. A pH of 7 indicates that a solution is _____; a pH <7 would mean the solution is _____; and a pH >7 is a(n) _____ solution.

12. Contrast a strong acid with a weak acid: _____