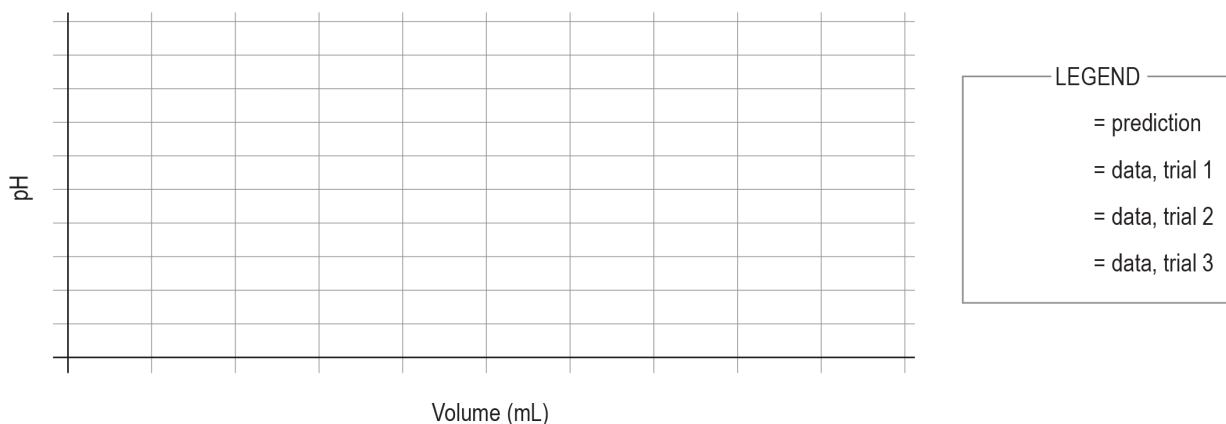


16B – TITRATION OF AN UNKNOWN ACID

Analysis Part 1 – Titration of a Strong Acid

Graph 1 – Predicted vs. actual pH data for titration of a strong acid



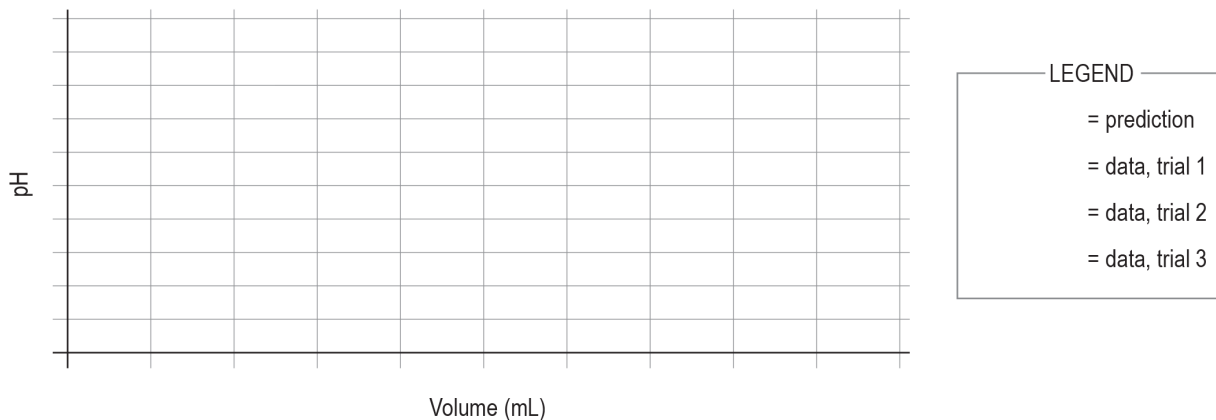
Questions Part 1 – Titration of a Strong Acid

1. How did your prediction compare to the actual graph?
2. Using your titration curves, what was the pH at equivalence for each trial?
3. Explain where to find the equivalence point on the graph.

- ❓ 4. Using your titration curves, what was the volume of NaOH used at the equivalence point for each trial?
- ❓ 5. Determine the concentration of the unknown strong acid for each trial.
- ❓ 6. What was the average of the calculated concentration values?

Analysis Part 2 – Titration of a Weak Acid

Graph 2 – Predicted vs. actual pH data for titration of a weak acid



Questions Part 2 – Titration of a Weak Acid

- ❓ 1. Using your graphs, determine the pH at the equivalence point for the weak acid. How did you find it?

- ❓ 2. Using your graphs, determine the volume of NaOH solution used to reach the equivalence point.

- ❓ 3. How does the equivalence point of the weak acid compare to the equivalence point for the strong acid?

- ❓ 4. Determine the concentration of the weak acid.

- ❓ 5. Is the strength of the acid, or the concentration of the acid responsible for the volume at equivalence point?

- ❓ 6. Is the strength of the acid, or the concentration of the acid responsible for the pH at the equivalence point?

- ❓ 7. Identify two sources of error that can occur during a titration and explain if they would make the concentration of acid higher or lower than expected.