

The pH of weak acids

Pre-lesson assignment – textbook p322-325

Define the following terms

- Weak Acid

Now watch the video tutorial on the pH of Weak Acids.

Make notes on the calculation of pH of weak acids.

Use the following questions as guidance:

1. Derive an expression for K_a that allows K_a to be calculated from equilibrium concentrations
2. Explain how approximations are used to simplify the equation.
3. What are the limitations of the equation caused by the approximation, and under what conditions can the approximations cause error in the calculation?
4. Show how pH of a weak acid can be calculated from K_a .
5. Show how K_a of a weak acid can be calculated from pH.