Differentiation is the process of finding the derivative of a function at any given value. The derivative of a function is a measure of how a function changes as its input values change. In other words, it is a way of finding the slope of a function at any given point. Differentiation is used to find the rate of change of a quantity with respect to another quantity, and is an essential tool in calculus. Differentiation is also used in many scientific and engineering fields.