

Abstract

Imagine that you are dealing with data function or a tabular function what is required is to find the first derivative at any node. Obviously, it is difficult to obtain any derivative of such functions using the laws and rules of calculus in the methods of mathematical analysis. This is because these functions are given in the form of tables and don't have the form of explicit functions. Thus, we see that there is a question that arises... is how to find the derivatives of tabular functions or data functions or those functions whose mathematical form is unknown or difficult and complex functions, with which it not possible to use traditional methods. The answer to this question is found in this chapter. We present numerical approximations to find approximate values of derivatives. However, we will deal with functions in one variable, and there fore we will find approximate values for ordinary derivatives only, we will not be exposed to finding approximate partial derivatives of functions in more than one variable. Because we are looking to find approximate derivatives at some nodes where the functions is defined, these approximate derivatives will be called numerical derivatives.