



RESEARCH ARTICLE

The Differential Problem of Two Types of Functions

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Abstract—This paper takes the mathematical software Maple as the auxiliary tool to study the differential problem of two types of functions. We can obtain the infinite series forms of any order derivatives of these two types of functions by using binomial series and differentiation term by term theorem. The research methods adopted in this study involved finding solutions through manual calculations and verifying these solutions by using Maple. This type of research method not only allows the discovery of calculation errors, but also helps modify the original directions of thinking from manual and Maple calculations. For this reason, Maple provides insights and guidance regarding problem-solving methods.

Keywords—derivatives; infinite series forms; binomial series; differentiation term by term theorem; Maple

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