

# Some new results on Conformable Fractional Power Series

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## Abstract

In this paper, some important results of the classical power series are generalized for the fractional power series. Some of these theorems are constructed by using conformable fractional derivatives. The ratio test has been specifically established to calculate the radius of convergence of a fractional power series, and several theorems of differentiability and integrability of the sum of a power series have been discussed in the sense of conformable fractional definition. In addition, the proposed series solution has been applied for the case of conformable fractional Airy differential equation.

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