

The incomplete exponential $\mathbf{{}_pR_q(\alpha, \beta; z)}$ function with some applications

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Abstract

In this paper, we are motivated to establish a generalization of ${}_pR_q(\alpha, \beta; z)$ function in terms of incomplete exponential functions and obtain some properties of the incomplete exponential ${}_pR_q(\alpha, \beta; z)$ function. Further we give generating relations for incomplete exponential ${}_pR_q(\alpha, \beta; z)$ function. Some applications related to ground water pumping (Hydrology) modelling and probability theory have also been discussed.

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