

ON SOME INTEGRALS AND FOURIER SERIES INVOLVING GENERALIZED HYPERGEOMETRIC FUNCTIONS

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Abstract

In the present paper we have evaluated an integral involving an exponential function, Sine function, generalized hypergeometric series and I -function, and we have employed it to evaluate a double integral and establish Fourier series for the product of generalized hypergeometric functions. We have also derived a double Fourier exponential series for the I -function. Our results are unified in nature and act as a key formula from which we can Derive many results as their particular cases, but due to lack of space we do not include them here.

Keywords : Generalized hypergeometric function, Fourier series, I -function.

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