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CONTENTS

Abstract: Let A be a commutative complex Banach algebra with unit. A famous theorem of Gleason Kahane-Zelasko states that a non-trivial linear functional $f : A \longrightarrow \mathbb{C}$ is multiplicative if and only if $f(x) \neq 0$ for all invertible $x \in A$. S. H. Kulkarni extended this result to real Banach algebras. In this paper a generalization of Kulkarni's theorem is proved: A non-trival, real-linear, complex-valued functional f on a real Banach algebra A with unit is multiplicative if and only if $(f(a))^2 + (f(b))^2 \neq 0$ for all commuting $a, b \in A$ with $a^2 + b^2 \in \{exp\,(x); x \in A\}$.

Abstract: Many authors have worked on the problem of obtaining integral relations involving higher classes of special functions of one or more variables (see Sivastava, Gupta and Goyal [4, pp. 72-74, 156-161] for details). In this paper we derive two new integral relations associated with some elementary functions and illustrate how they can be applied to derive double integrals which may be of interest. One of our integral relations is applied to evaluate three new and general double integrals involving a special case of the multivariable H-function of Srivastava and Panda [6].

Abstract: The object of the present paper is to derive a property for close-to-convex functions of order α in the unit disk.

Abstract: A class $A^p(a)$ of p-valently α convex functions in the unit disk is introduced. The object of the present paper is to prove some properties of functions belonging to the class $A^p(a)$.

Abstract: The object of the present paper is to determine the order of close-to-convexity of certain univalent functions in the unit disk.

Rajni Gupta

Abstract: In this sequel to an earlier paper[2], we establish three new transformations of double infinite series involving the multivariable H-function introduced and studied in a series of papers by Srivastava and Panda ([4], [5] and [6]; see also [3, p. 251]). Our results are quite general in character and a number of (known and new) transformation formulas can be deduced as their particular cases. Several such interesting special and confluent cases of our main results are mentioned briefly.

N. S. Bhave and T. T. Raghunathan

Abstract: In this paper, the bornological structure of the dual $\overline{A(X, C, s)}$ of the generalised space $A(X, C, s)$ of entire functions is investigated.

J. L. Brenner

Abstract: The fundamental properties of the symmetric group are shown to follow directly from the postulates (12) (34)=(34) (12), (12)(23)=(23) (13), ((ab)(cd)) (ef)=(ab)((cd)(ef)). Only a little graph theory is needed.

Themistocles M. Rassias

Abstract: The aim of this work is to discuss some of the properties, and to propose a few research problems, concerning mappings that preserve unit distance.

Paul Erdös and Carl Pomerance

Abstract: Suppose $g(n)$ tends monotonically to infinite and $g(n)/n$ tends to zero. If f is an integer-valued arithmetic function with normal order g, then the set of n such that $f(n)$ divides n has asymptotic density zero. More generally, the set of n with a divisor between $g(n)$ and $2g(n)$ has asymptotic density zero.

V. M. Sehgal, S. P. Singh and J. H. M. Whitfield

Abstract: In this paper, we give results in weak topology using KKM-map principle. We derive several fixed point theorems as corollaries.

D. N. Sarkhel and T. Chakraborti

Abstract: The notions of seperated sets in measure and density topology are studied in a topological Vitali measure space satisfying the outer regularity property.

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