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CONTENTS

this paper we find an improvement of the lower bound for any k and r; and thereby find the exact values of $D(Q_{k,3})$ for $k \neq 7$ and $D(Q_{k,4})$ for $k \neq 10, 11$. Adopting our method one can find $D(Q_{k,r})$ with the knowledge of $D(Q_r)$, where Q_r is the set of all r-free integers.

Abstract: The concept of relative measurability of sets and functions and also of relative local measurability of sets have been introduced in the context of a topological group. We prove some basic theorems and establish certain connection between relative measurability of sets, seperated sets and points of density of sets.

Abstract: Let $M_n(\alpha)$ denote the class of functions $f(z) = \frac{1}{z} + \sum_{k=1}^{\infty} a_k z^k$ that are regular in the punctured disk $E = \{z : 0 < |z| < 1\}$ and satisfying
Re $\left\{(n+1)(D^{n+1}f(z))'/(D^n f(z))' - (n+2)\right\} < -\alpha$, $0 \leq \alpha < 1, |z| < 1, n \in N_0 = \{0, 1, 2, \ldots\}$ where $D^n f(z) = 1/\left\{z(1-z)^{n+1}\right\} * f(z)$ ($*$ is the Hadamard convolution).

(i) For $0 \leq \alpha < 1; n \in N_0, M_{n+1}(\alpha) \subset M_n(\alpha)$ is proved.

(ii) Let $\sigma_n(\alpha) = M_n(\alpha) \cap \sigma$ where σ denotes the subclass of $\sum$ consisting of functions of the form $f(z) = \frac{1}{z} - \sum_{k=1}^{\infty} |a_k| z^k$. Coefficient inequalities, distortion and closure theorems are obtained for the class $\sigma_n(\alpha)$.

Abstract: A special conformally conservative Kähler space is flat if its scalar curvature is zero. For non-zero scalar curvature it is Ricci symmetric with parallel curvature tensor, a simple K^* space and the Ricci tensor is of rank 2 with two distinct eigen values. Expressions for Ricci tensor and curvature tensor are given.

Abstract: In this paper we derive a number of new and useful results for the fractional integral operators involving a general class of polynomials due to Srivastava [5]. Our results are quite general in character and by suitably specializing the coefficients $A_{n,k}$, one can easily obtain a large number of (known or new) results for fractional operators involving classical orthogonal polynomials, Bessel polynomials, and other generalized hyper-geometric polynomials.

Abstract: In this paper a theorem of Beurling's type on Bergman space is proved. Moreover, a class of finite rank Hankel operators on Bergman space is characterized. In particular, it is shown that the Hankel operator S_ϕ, defined on the Bergman space A_2, with $\phi \in L^\infty$, is of finite rank if and only if ϕu is orthogonal to the space of all complex conjugates of functions f in A_2, where u is a finite Blaschke product. Also,

it is proved that if S is an operator on A_2 of finite rank such that $ST_z = T_{\bar{z}}S$, then $S = S_{\bar{h}}$ with $h = \sum_{i=1}^{n} \lambda_i k_{\alpha i, ri-1}$, where $k_\alpha(z) = (1 - \bar{\alpha}z)^{-2}$ and $k_{\alpha,r} = \frac{\partial^r}{\partial \alpha^r} k_\alpha$.

Sunder Lal and M. S. Rahman

A NOTE ON QUASI-NORMAL SPACES 87-94

Abstract: Some properties of quasi-normal spaces are studied. In particular, a few results on mildly normal spaces by Singal and Singal [12] and Noiri [6] are improved.

S. A. Settu

ON EQUIVALENCE OF SUMMABILITY OF FOURIER SERIES 95-107

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H. M. Srivastava

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