

SUBCLASSES OF ANALYTIC FUNCTIONS DEFINED BY NEW GENERALISED DERIVATIVE OPERATOR

(Subkelas Fungsi Analisis Dditakrif oleh Pengoperasi Terbitan Teritlak)

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ABSTRACT

A new generalised derivative operator $D_{\lambda, \lambda_2, b}^{n, m}$ is introduced. This operator generalised some well-known operators studied earlier. New subclasses of analytic functions in the open unit disc which are defined using generalised derivative operator are introduced. Inclusion theorems are investigated. Furthermore, generalised Bernardi-Libera-Livington integral operator is shown to be preserved for these classes.

Keywords: analytic functions; univalent functions; starlike functions; convex functions; close-to-convex functions; subordination; Hadamard product; integral operator.

ABSTRAK

Pengoperasi terbitan baharu teritlak $D_{\lambda, \lambda_2, b}^{n, m}$ diperkenalkan. Pengoperasi ini mengitlak beberapa pengoperasi terdahulu yang terkenal. Subkelas baharu fungsi analisis dalam cakera terbuka unit diperkenalkan yang ditakrif dengan menggunakan pengoperasi terbitan teritlak. Teorem rangkuman dikaji. Malah pengoperasi kamiran Bernardi-Libera-Livington ditunjukkan kekal untuk kelas tersebut.

Kata kunci: fungsi analisis; fungsi univalen; fungsi bak bintang; fungsi cembung; fungsi hampir cembung; subordinasi; hasil darab Hadamard; pengoperasi kamiran.

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