

## PROBLEMS AND PROPERTIES OF A NEW DIFFERENTIAL OPERATOR

(Masalah dan Sifat-sifat suatu Pengoperasi Pembeza Baharu)

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### ABSTRACT

In this paper, we introduce and study a new differential operator defined in the open unit disc  $U = \{z : z \in C \wedge |z| < 1\}$ . Using this operator, we then introduce a new subclass of analytic functions  $G_n(\mu, \lambda, \alpha, \beta, b)$ . Moreover, we discuss coefficient estimates, growth and distortion theorems and inclusion properties for the functions belonging to the class  $G_n(\mu, \lambda, \alpha, \beta, b)$ .

**Keywords:** Analytic functions; convex functions; differential operator

### ABSTRAK

Dalam makalah ini, pengoperasi pembeza baharu dalam cakera unit  $U = \{z : z \in C \wedge |z| < 1\}$  diperkenalkan dan dikaji. Dengan menggunakan pengoperasi ini, subkelas baru fungsi analisis  $G_n(\mu, \lambda, \alpha, \beta, b)$  diperkenalkan. Malah anggaran pekali, teorem pertumbuhan dan erotan, dan sifat rangkuman untuk kelas  $G_n(\mu, \lambda, \alpha, \beta, b)$  turut dibincangkan.

**Kata kunci:** Fungsi analisis; fungsi cembung; pengoperasi pembeza

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