

FUNCTIONS CLOSE-TO-CONVEX AND QUASI-CONVEX ORDER β TYPE γ WITH RESPECT TO OTHER POINTS

¹AINI JANTENG, ²SUZEINI ABDUL HALIM, ³MASLINA DARUS

^{1,2}Institute of Mathematical Sciences, Universiti Malaya, 50603 Kuala Lumpur

³School of Mathematical Sciences, Faculty of Sciences and Technology,
Universiti Kebangsaan Malaysia,
43600 Bangi, Selangor

E-mail : aini_jg@ums.edu.my, suzeini@um.edu.my, maslina@pkrisc.cc.ukm.my

Research Report No. 1/2006

Abstract

In 1977, Das and Singh introduced the class of functions close-to-convex with respect to (w.r.t) symmetric points. We extend this class. For $0 \leq \beta < 1$ and $0 \leq \gamma < 1$, let $K_s(\beta, \gamma)$ be the class of normalised analytic functions f defined in the open unit disc D which are close-to-convex of order β type γ , w.r.t symmetric points. Similar classes $K_c(\beta, \gamma)$ and $K_{sc}(\beta, \gamma)$ are also defined. Next, we look at the class of functions quasi-convex w.r.t symmetric points. We extend this class. For $0 \leq \beta < 1$ and $0 \leq \gamma < 1$, let $K_s^*(\beta, \gamma)$ be the class of functions quasi-convex of order β type γ , w.r.t symmetric points. Two other similar classes, $K_c^*(\beta, \gamma)$ and $K_{sc}^*(\beta, \gamma)$ are also considered. We give properties for functions belonging to all these classes.

Keywords: functions starlike of order γ w.r.t symmetric points, functions close-to-convex w.r.t symmetric points, integral operators.