

PROPERTIES OF HARMONIC MEROMORPHIC FUNCTIONS WHICH ARE STARLIKE OF ORDER β WITH RESPECT TO SYMMETRIC POINTS

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

¹*Institute of Mathematical Sciences, Faculty of Science, Universiti Malaya, 50603 Kuala Lumpur*

²*School of Science and Technology, Universiti Malaysia Sabah, Locked Bag No. 2073, 88999 Kota Kinabalu, Sabah*

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

¹suzeini@um.edu.my, ²aini_jg@ums.edu.my, ³maslina@pkrisc.cc.ukm.my

Research Report No. 1/2007

Abstract

Let \sum_H denote the class of functions f which are harmonic, meromorphic and univalent in $\tilde{U} = \{z : |z| > 1\}$. This paper defines and investigates a family of complex-valued harmonic functions that are orientation preserving and univalent in \tilde{U} and are related to the functions starlike of order β ($0 \leq \beta < 1$), with respect to symmetric points. We obtain coefficient conditions, growth result, extreme points, convolution and convex combinations for this harmonic meromorphic functions.

Keywords : Harmonic meromorphic functions, starlike of order β with respect to symmetric points, coefficient estimates.