

ASYMPTOTICS OF EIGENFUNCTIONS FOR DISCRETE KLEIN-GORDON EQUATION

A. M. MARIN¹, R. D. ORTIZ² AND J. A. RODRIGUEZ³

^{1,2} Faculty of Exact and Natural Sciences,

University of Cartagena, Sede Piedra de Bolivar,

Avenue of Consulado, Cartagena de Indias, Bolivar, Colombia

E-mail: ¹ amarinr@unicartagena.edu.co, ² rortizo@unicartagena.edu.co

³ Morelia Institute of Technology, Morelia, Michoacán, Mexico

E-mail: joel@ifm.umich.mx

Abstract

In this paper we are going to consider the one-dimensional discrete Klein-Gordon equation. It is known that the essential spectrum of discrete Klein-Gordon operator consists of one segment of finite length. One eigenvalue appears below the essential spectrum. We give explicit formula for this eigenvalue.

Key Words : *Asymptotics, Eigenfunctions.*

AMS Subject Classification : 31A10, 39A10.