

RESULTS ON POLAR LATTICES

A thesis presented by

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SUMMARY AND CONTENTS

This thesis is concerned with some results on polar lattices, especially on positive points in polar lattices.

Part of this thesis (Section 1 and the Subsection 2.1) is a survey of literature on polar lattices and the rest is original work, mainly on positive points in two-dimensional polar lattices.

Section 1

- 1.1 Preliminaries
- 1.2 Polar analogue of the fundamental theorem of Minkowski
- 1.3 Successive minima of convex bodies
- 1.4 A relation between polar convex bodies and bases of polar lattices
- 1.5 A result on the polar lattice of a grid

Section 2

- 2.1 Hossain and Worley's theorems on positive points of polar lattices in \mathbb{R}^2 .
- 2.2 A theorem on positive points in two-dimensional polar lattices

