## Contents



Chapter 1	The method of segment replacement for distance	
	inequalities	1
Chapter 2	Ptolemy's inequality and its application	12
Chapter 3	Inequality for the inscribed quadrilateral	22
Chapter 4	The area inequality for special polygons	36
Chapter 5	Linear geometric inequalities	52
Chapter 6	Algebraic methods	64
Chapter 7	Isoperimetric and extremal value problem	73
Chapter 8	Embed inequality and inequality for moment of	
	inertia	81
Chapter 9	Locus problem of Tsintsifas's inequality	95
Chapter 10	Shum's minimal circle problem	100
Chapter 11	Inequalities for tetrahedron	108
Answers and hints to selected exercises		119