

# **Techniques in Olympiad Inequalities**

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## Preface

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# Chapter 1

## Basics

### 1.1 Introduction

### 1.2 Power Mean Inequality

### 1.3 Cauchy-Schwarz Inequality

### 1.4 Rearrangement and Chebyshev Inequality

### 1.5 Majorization, Karamata and Jensen's Inequality



## Chapter 2

# The Buffalo Way





# Chapter 3

## Substitutions



## Chapter 4

# Homogenization and Normalization



## Chapter 5

# Engel Form of Cauchy-Schwarz



## Chapter 6

# Reverse Rearrangement Inequality





## Chapter 7

# Squares Analysis Method



## Chapter 8

# The UVW Method



## Chapter 9

# Mixing Variables Technique



## Chapter 10

# Schur-Vornicu-Mildorf Inequality





# Chapter 11

## Dumbassing



## Chapter 12

# The Equal Variable Method



## Chapter 13

## Problems



## Chapter 14

## Exercises

