

This is the title of the thesis submitted to Iowa State University on the first line
Note that only the first letter of the first word and proper names are capitalized and
this is the second line

by

Alice Wonder

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Mathematics

Program of Study Committee:
John Smith, Major Professor
Jane Dee
Allen Wrench

The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this dissertation. The Graduate College will ensure this dissertation is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University

Ames, Iowa

2024

Copyright © Alice Wonder, 2024. All rights reserved.

DEDICATION

I would like to dedicate this thesis to my wife Glenda and to my daughter Alice without whose support I would not have been able to complete this work.

TABLE OF CONTENTS

	Page
LIST OF TABLES	v
LIST OF FIGURES	vi
NOMENCLATURE	vii
ACKNOWLEDGMENTS	vii
ABSTRACT	viii
CHAPTER 1. OVERVIEW	1
1.1 Introduction	1
1.1.1 Hypothesis	1
1.1.2 Second Hypothesis	1
1.2 Criteria Review	2
CHAPTER 2. REVIEW OF LITERATURE	3
2.1 Introduction	3
2.1.1 Hypothesis	3
2.1.2 Second Hypothesis	3
2.2 Criteria Review	4
2.3 Continuing Tables	4
CHAPTER 3. METHODS AND PROCEDURES	6
3.1 Introduction	6
3.1.1 Hypothesis	6
3.1.2 Second Hypothesis	7
3.2 Criteria Review	8
CHAPTER 4. RESULTS	9
4.1 Introduction	9
4.1.1 Hypothesis	9
4.1.2 Second Hypothesis	10
4.2 Criteria Review	10
CHAPTER 5. SUMMARY AND DISCUSSION	11
5.1 Introduction	11

5.1.1 Hypothesis	12
5.1.2 Second Hypothesis	14
5.2 Criteria Review	14
5.3 Results And Discussion	14
BIBLIOGRAPHY	15

LIST OF TABLES

	Page
Table 2.1 This is a two-part table doing things.	4
Table 3.1 Short caption for List of Figures/ Tables	6
Table 3.2 This table shows a standard empty table witha limited caption width	8
Table 4.1 Moon Data	9
Table 5.1 This table shows almost nothing but is a sideways table and takes up a whole page by itself	13

LIST OF FIGURES

	Page
Figure 3.1 Short caption for List of Figures/ Tables	7
Figure 4.1 Durham Centre	10
Figure 5.1 Durham Centre— Another View	11

ACKNOWLEDGMENTS

I would like to take this opportunity to express my thanks to those who helped me with various aspects of conducting research and the writing of this thesis. First and foremost, Dr. Susan D. Ross for her guidance, patience and support throughout this research and the writing of this thesis. Her insights and words of encouragement have often inspired me and renewed my hopes for completing my graduate education. I would also like to thank my committee members for their efforts and contributions to this work: Dr. August Tanner and Dr. Lewis Hargrave. I would additionally like to thank Dr. Tanner for his guidance throughout the initial stages of my graduate career and Dr. Hargrave for his inspirational teaching style.

ABSTRACT

This is the text of my abstract that is part of the thesis itself. The abstract describes the work in general and the heading and style match the rest of the document.

CHAPTER 1. OVERVIEW

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

1.1 Introduction

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

1.1.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

1.1.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

1.1.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

1.1.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

1.2 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.

(Correa et al., [pre-published](#)),(Klee et al., [1963](#))

CHAPTER 2. REVIEW OF LITERATURE

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

2.1 Introduction

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

did the initial work in this area. But in Struss' work (Bui, [2023](#)) the definitive model is seen.

2.1.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

2.1.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

2.1.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

2.1.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

2.2 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.

2.3 Continuing Tables

Table 2.1: This is a two-part table doing things.

[illegible]

Table 2.1: Continued

k	q	p+	p-	s1	s2	s3	RHS
2	2	2	-2	1	0	0	1
-T	0	1	-1	0	1	0	0
T	-1	0	0	0	0	1	0
-1	1	-1	1				
2(T+1)	2	0	0	1	-2	0	1
-T	0	1	-1	0	1	0	0
T	-1	0	0	0	0	1	0
-(T+1)	1	0	0	0	1	0	
0	2+2(T+1)/T	0	0	1	-2	-2(T+1)/T	1
0	-1	1	-1	0	1	1	0
1	-1/T	0	0	0	0	1/T	0
0	1-(T+1)/T	0	0	0	1	(T+1)/T	
0	2(2T+1)/T	0	0	1	-2	-2(T+1)/T	1
0	-1	1	-1	0	1	1	0
1	-1/T	0	0	0	0	1/T	0
0	-1/T	0	0	0	1	(T+1)/T	
0	1	0	0	T/2(2T+1)	-T/(2T+1)	-1	T/2(2T+1)
0	0	1	-1	T/2(2T+1)	1-T/(2T+1)	0	T/2(2T+1)
1	0	0	0	1/2(2T+1)	-1/(2T+1)	0	1/2(2T+1)
0	0	0	0	1/2(2T+1)	1-1/(2T+1)	-1+(T+1)/TT	

CHAPTER 3. METHODS AND PROCEDURES

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

3.1 Introduction

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

As can be seen in [Table 3.1](#) it is truly obvious what I am saying is true.

Table 3.1: This table shows a standard empty table(Klee et al., [1963](#)) . Remove the square bracketed information to get longer captions in the LOT/ LOF

3.1.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

This can also be seen in [Figure 3.1](#) that the rest is obvious.



Figure 3.1: This table shows a standard empty figure. Remove the square bracketed information to get longer captions in the LOT/ LOF

3.1.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

3.1.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

3.1.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

3.2 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion as can be seen in [Table 3.2](#).

Header	head	head
leg	leg	leg
leg	leg	leg
leg	leg	leg

Table 3.2: This table shows
a standard empty table with a
limited caption width

CHAPTER 4. RESULTS

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

4.1 Introduction

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

Of course, data on this as seen in [Table 4.1](#) is few and far between.

Table 4.1: Moon Data

Element	Control	Experimental
Moon Rings	1.23	3.38
Moon Tides	2.26	3.12
Moon Walk	3.33	9.29

4.1.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

Or graphically as seen in [Figure 4.1](#) it is certain that my hypothesis is true.

4.1.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.



Figure 4.1: Durham Centre

4.1.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

4.1.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

4.2 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.

CHAPTER 5. SUMMARY AND DISCUSSION

This is the opening paragraph to my thesis which explains in general terms the concepts and hypothesis which will be used in my thesis.

With more general information given here than really necessary.

5.1 Introduction

Here initial concepts and conditions are explained and several hypothesis are mentioned in brief.

Or graphically as seen in [Figure 5.1](#) it is certain that my hypothesis is true.



Figure 5.1: Durham Centre— Another View

5.1.1 Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

As can be seen in [Table 5.1](#) it is truly obvious what I am saying is true.

Table 5.1: This table shows almost nothing but is a sideways table and takes up a whole page by itself

Element	Control	Experimental
Moon Rings	1.23	3.38
Moon Tides	2.26	3.12
Moon Walk	3.33	9.29

5.1.1.1 Parts of the hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

5.1.2 Second Hypothesis

Here one particular hypothesis is explained in depth and is examined in the light of current literature.

5.1.2.1 Parts of the second hypothesis

Here one particular part of the hypothesis that is currently being explained is examined and particular elements of that part are given careful scrutiny.

5.2 Criteria Review

Here certain criteria are explained thus eventually leading to a foregone conclusion.

5.3 Results And Discussion

Here the results can be inserted

BIBLIOGRAPHY

- Bui, V. (2023, April 13). *Every generating polytope is strongly monotypic*. arXiv: [2210.07690](https://arxiv.org/abs/2210.07690) [math]. Retrieved September 19, 2024, from <http://arxiv.org/abs/2210.07690>
- Correa, R., Hantoute, A., & López, M. (pre-published). *Valadier-like formulas for the supremum function II: The compactly indexed case*. arXiv: [1707.03774](https://arxiv.org/abs/1707.03774).
- Klee, V., Danzer, L., & Grünbaum, B. (1963). Helly's theorem and its relatives. In V. Klee (Ed.), *Convexity* (pp. 101–180, Vol. 7). American Mathematical Society.