

TABLE OF CONTENTS

	<i>Page</i>
Validity Sheet.....	<i>i</i>
Original Statement Sheet.....	<i>iii</i>
Publication Approval Sheet	<i>iv</i>
Author’s Curriculum Vitae	<i>ii</i>
Abstrak	<i>v</i>
Abstract	<i>vii</i>
Foreword	<i>viii</i>
Table of Contents	<i>x</i>
List of Figures	<i>xiii</i>
List of Tables.....	<i>xiv</i>
List of Appendices	<i>xv</i>
CHAPTER I. INTRODUCTION.....	1
1.1. Background of Study	1
1.2. Problem Identification	5
1.3. Scope of Study	6
1.4. Research Questions.....	6
1.5. Research Purposes	6
1.6. Research Benefits	7
CHAPTER II. LITERATURE REVIEW.....	8
2.1. Theoretical Review.....	8
2.1.1. Learning Media.....	8
2.1.1.1. Function and Benefits of Learning Media	9
2.1.1.2. Learning Media Selection Criteria.....	10
2.1.1.3. Types of Learning Media.....	11
2.1.2. GeoGebra Application	11
2.1.2.1. The Definition of GeoGebra	11
2.1.2.2. The View of GeoGebra.....	13
2.1.2.3. GeoGebra as a Pedagogical Tool.....	16
2.1.2.4. Advantages and Disadvantages og GeoGebra Learning Media.....	17

2.1.3.	Understanding Mathematical Problem-Solving Skills.....	18
2.1.3.1.	Definition of Problem-Solving Skills	18
2.1.4.	The Relationship Between GeoGebra and Problem Solving Skills	21
2.1.5.	Teaching Materials.....	23
2.1.5.1.	The Learning Material of Circle	23
2.1.5.1.1.	Circle Equation	24
2.1.5.1.2.	Position of Points and Lines with Respect to the Circle ...	25
2.1.5.1.3.	The Equation of the Tangent Line of a Circle.....	26
2.1.5.2.	Teaching Material Circle With GeoGebra.....	26
2.2.	Relevant Research.....	28
2.3.	Conceptual Framework.....	29
2.4.	Research Hypothesis.....	31
CHAPTER III. RESEARCH METHODS		32
3.1.	Location and Time of Research.....	32
3.2.	Population and Sample	32
3.2.1.	Research Population	32
3.2.2.	Research Sample.....	32
3.3.	Research Type and Design	33
3.4.	Research Variables	34
3.5.	Operational Definition.....	35
3.6.	Research Data Collection Techniques and Instruments ...	35
3.6.1.	Data Collection Technique	35
3.6.1.1.	Test	36
3.6.1.2.	Interview	36
3.6.2.	Data Collection Instruments	36
3.6.2.1.	Instrument for Test of Mathematical Problem Solving Skills	37
3.6.3.	Pilot Test of Research Instruments	39
3.6.3.1.	Content Validity	39
3.7.	Research Procedure	40
3.8.	Data Analysis.....	42

3.8.1.	Calculating Average Value and Standard Deviation	42
3.8.2.	Normality Test	42
3.8.3.	Homogeneity Test	43
3.8.4.	N-Gain Test	44
3.8.5.	Hypothesis Test	44
3.8.6.	Statistical Hypothesis	46
CHAPTER IV. RESULTS AND DISCUSSION.....		47
4.1.	Research Results	47
4.1.1.	Description of Research Location	47
4.1.2.	Students' Mathematical Problem Solving Skills	48
4.1.2.1.	Description of the Results of the Initial Skills of Mathematical Problem Solving	48
4.1.2.1.1.	Skills to Understand The Problems.....	48
4.1.2.1.2.	Skills to Plan The Problem Solving	49
4.1.2.1.3.	Skills to Recheck Problem Solving.....	50
4.1.2.1.4.	Problem Solving Skills.....	50
4.1.2.2.	Description of the Results of Mathematical Problem Solving Skills Using GeoGebra Learning Media (Experimental Class) and Conventional (Control Class).....	52
4.1.3.	Data Analysis Requirements Test	54
4.1.3.1.	Normality Test	54
4.1.3.2.	Homogeneity Test	55
4.1.4.	Hypothesis Test.....	56
4.1.4.1.	N-Gain Test.....	56
4.1.4.2.	T-Test	56
4.2.	Discussion of Research Results	58
CHAPTER V. CONCLUSION AND SUGGESTION		64
5.1.	Conclusion	64
5.2.	Suggestion.....	64
BIBLIOGRAPHY		66
APPENDICES		68