



**SAMSEN WITTAYALAI SCHOOL  
ENGLISH PROGRAM**

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**COURSE OUTLINE**

**Subject:** Mathematics (MA21101)

**Course Classification:**  Foundation  Additional

**Learning Period:** 3 Periods/Week(150mins)

**Credit Unit:** 1.5

**Grade Level:** Mattayomsuksa 1 (Grade 7)

**Semester 1 Academic Year 2022**

**Learning Area:** Mathematics

**Samsenwittayalai School English Program**

**Teachers:** Ms. Joy D. Soliva (2 periods/week )

**Thai Teacher** (1 period/week)

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**I. COURSE DESCRIPTION**

The course is aimed to study, practice, develop mathematical skills, reasoning skills, and problem-solving skills, and apply knowledge through study of the following: Integers, Fractions and Decimals with Application of Probability, Index Notation, Basic Geometric Construction, and Relationship of 2-D and 3-D Geometric Figures. Academic courses develop students' knowledge and skills through the study of theory and abstract problems. Applied courses focus on the essential concepts of a subject, and develop learners' knowledge and skills through practical applications and vivid examples.

By presenting the lessons in systematic, creative, and fun way along with exercises, worksheets, projects, and assignments, it will help the learners to surmise the main thought, show processes, draw geometric figures and describe its characteristics considered from the content, and explain the concept and its application to real life. Surround experiences or situations will be set in the study with practice, summarizing, interpreting and reporting. The learning assessment and evaluation methods are done according to the school's curriculum: student's knowledge, skill, interest, and behavior.

For applying the knowledge, the purpose is to develop learners' skills in calculation, problem solving, reasoning, mathematical communication, and application of experience in knowledge, and obtained processes to learn things in daily life creatively. Furthermore, learners will be trained to have appreciation with good attitude towards mathematics as well as ability to work orderly, carefully, responsibly, mindfully, and confidently which will prepare them for their future studies.

## II. INDICATORS / LEARNING OUTCOMES

1. Learners' reading, analytical thinking and writing skills meet the criteria prescribed by the respective educational institutions.
2. Learners' desirable characteristics meet the criteria prescribed by the respective educational institutions.
3. Understand the rational number and relationship of rational numbers and use the properties of rational numbers to solve math problems and real life problems.
4. Understand and use exponential property with positive integer exponent. To solve math problems and real life problems.
5. Use geometric knowledge and tools such as compass and straight edge, including Geometer's Sketchpad or other dynamic geometry programs, to create geometric shapes. Apply this knowledge to create solutions to solve problems in real life.
6. Understand and apply geometric knowledge to analyze relationships between two-dimensional and three-dimensional figures.

## III. TENTATIVE COURSE OUTLINE (about 18 weeks)

Week	Topics / Contents	Indicator(s)	Period(s)
Week 1-8 T.JOY	<ul style="list-style-type: none"> <li>• Introduction to Mathematics and Integers</li> </ul>	MA 1.1.1	1
	<ul style="list-style-type: none"> <li>• Integer Operations</li> <li>• Properties of Integers</li> <li>• Order of Integers</li> </ul>	MA 1.1.1	2
	<ul style="list-style-type: none"> <li>• Application of Order of Integers</li> <li>• Integral Word Problems and their Application</li> </ul>	MA 1.1.1	2
	<ul style="list-style-type: none"> <li>• Application of Integers in Real Life</li> <li>• <b>UNIT TEST</b></li> </ul>	MA 1.1.1	2
Week 1-8 THAI TEACHER	<ul style="list-style-type: none"> <li>• Introduction to Fractions</li> <li>• Fraction Operations</li> </ul>	MA 1.1.1	1
	<ul style="list-style-type: none"> <li>• Relationship of Fractions and Decimals</li> <li>• Place Values and Comparison of Decimals</li> </ul>	MA 1.1.1	1
	<ul style="list-style-type: none"> <li>• Decimal Operations</li> <li>• Word Problems Involving Decimals and Fractions and Its Application</li> </ul>	MA 1.1.1	1
	<b>UNIT TEST</b>	MA 1.1.1	1
WEEK 9	<b>MIDTERM EXAMINATION</b>		1
Week 10-17 THAI TEACHER	<ul style="list-style-type: none"> <li>• Laws and Properties of Exponents</li> <li>• Multiplication of Exponential Numbers including Negative Exponents</li> </ul>	MA 1.1.2	1
	<ul style="list-style-type: none"> <li>• Division of Exponential Numbers including Negative Exponents</li> <li>• Scientific Notation</li> </ul>	MA 1.1.2	1

	<ul style="list-style-type: none"> <li>Word Problems Involving Exponential Numbers and Its Application</li> </ul> <p style="text-align: center;"><b>UNIT TEST</b></p>	MA 1.1.2	1
Week 10-17 T.JOY	<ul style="list-style-type: none"> <li>Introduction to Basic Geometry</li> </ul>	MA 2.2.1	1
	<ul style="list-style-type: none"> <li>Basic Geometric Construction of 2-D figures using compass</li> </ul>	MA 2.2.1	2
	<ul style="list-style-type: none"> <li>Simple Geometric Construction of 2-D figures using compass</li> </ul>	MA 2.2.2	2
	<ul style="list-style-type: none"> <li>Introduction to 2-D and 3-D Geometric Figures</li> <li>Cross-Sections of 3-D Geometric Figures</li> <li>3-D Dimensional Geometric Figures Formed by Cubes</li> </ul>	MA 2.2.2	2
	<ul style="list-style-type: none"> <li>Drawing or Constructing 3-D Figures by Cubes From Front View, Side View and Top View of 2-D Images</li> </ul> <p style="text-align: center;"><b>UNIT TEST</b></p> <p style="text-align: center;"><b>REVIEW FOR FINALS</b></p>	MA 2.2.2	2
WEEK 18	<b>FINAL EXAMINATION</b>		1

#### IV. Teaching Methods and Management

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|--|--|--|
| <input checked="" type="checkbox"/> Discovery Learning | <input checked="" type="checkbox"/> Lecture/Discussion | <input checked="" type="checkbox"/> Group work         |
| <input checked="" type="checkbox"/> Individual work    | <input checked="" type="checkbox"/> Game               | <input checked="" type="checkbox"/> Song               |
| <input checked="" type="checkbox"/> Self-learning      | <input checked="" type="checkbox"/> Demonstration      | <input checked="" type="checkbox"/> Video Presentation |
| <input checked="" type="checkbox"/> Project            | <input checked="" type="checkbox"/> Experience         | <input checked="" type="checkbox"/> Local Wisdom based |

#### V. Teaching Materials/ Supplements

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|---|---|--|
| <input checked="" type="checkbox"/> Handouts  | <input checked="" type="checkbox"/> Worksheets      | <input checked="" type="checkbox"/> Teacher's text book  |
| <input checked="" type="checkbox"/> Graphs/ Diagrams  | <input checked="" type="checkbox"/> Pictures        | <input checked="" type="checkbox"/> Commercial Text Book |
| <input checked="" type="checkbox"/> Samples/ Models   | <input checked="" type="checkbox"/> Book Exercise/s |  |
| <input checked="" type="checkbox"/> Website Khan Academy  |   |  |
| <input checked="" type="checkbox"/> Application Software : Geometer's SketchPad , GeoGebra , Microsoft Office |   |  |

## VI. Assessment and Evaluation

Indicator / Learning Outcome Score from SGS	Formative I				Midterm	Formative II						Final
	1	2	3	4		10	11	12	13	14	15	
<b>Total score</b>	10				15	10	10	10	10	10	5	20
Learners' reading, analytical thinking						10						
Learners' desirable characteristics							10					
MA 1.1.1	10				15			10				5
MA 1.1.2									10			6
MA 2.2.1										10		5
MA 2.2.2											5	4

## VII. Assignment

SGSNo.	Score (points)	Assignment	Deadline	Type		
				Test	Individual	Group
1.	6	Quiz/homework/ worksheet/Unit Test	Week 8		✓	
	4	Quiz/homework/ worksheet/Unit Test	Week 8		✓	
Midterm	15	Midterm Exam	Week 9	✓		
10	10	Learners' reading, analytical thinking	Week 18		✓	
11	10	Learners' desirable characteristics	Week 18		✓	
12	6	Quiz/homework/ worksheet/Unit Test	Week 12			
	4	Quiz/homework/ worksheet/ Unit Test	Week 12		✓	
13	6	Quiz/homework/ worksheet/Unit Test	Week 14		✓	
	4	Quiz/homework/ worksheet/Unit Test	Week 14		✓	
14	6	Quiz/homework/ worksheet/Unit Test	Week 17		✓	
	4	Quiz/homework/ worksheet/Unit Test	Week 17		✓	
15	5	Project Report	Week 16			✓
Final	20	Final Exam	Week 18	✓		

**Note: The details in assessment and evaluation are tentative.**