

PACE ACADEMY
GENERAL MATHEMATICS
CURRICULUM GUIDE
S.Y. 2020-2021

Most Essential Learning Competencies	General Mathematics Lessons
FIRST QUARTER	
Represents real-life situations using functions, including piece-wise functions	Lesson 1.1 Functions as Models
Solve problems involving functions	
Evaluates a function	Lesson 1.2 Evaluation of Functions
Solves problems involving functions	
Performs addition, subtraction, multiplication, division, and composition of functions	Lesson 1.3 Operations on Functions
Represents real-life situation using rational functions	Lesson 1.4 Representing Real-life Situations Using Rational Functions
Distinguishes rational function, rational equation, and rational inequality	Lesson 1.5 Rational Functions, Equations and Inequalities
Solve rational equations and inequalities	Lesson 1.6 Solving Rational Equations and Inequalities
Solve problems involving rational equations and inequalities	
Represents a rational function through its: (a) table of values, (b) graph, and (c) equation	Lesson 1.7 Representation of Rational Functions
Solve problems involving rational functions	
Finds the domain and range of a rational function	Lesson 1.8 Graphing Rational Functions
Determine the: (a) intercepts, (b) zeros, and (c) asymptote of rational functions	
Graph Rational Functions	
Solves problems involving rational functions, equations, and inequalities	
Represents real-life situations using one to one functions	Lesson 1.9 One to One Function
Determines the inverse of a one-to-one function	Lesson 1.10 Inverse of One-to-One Functions
Represents an inverse function through its table of values	
Solve situational problems involving inverse functions	
Represent an inverse function through its graph	Lesson 1.11 Graphs of Inverse Function
Finds the domain and range of an inverse function	
Graph inverse function	
Solves problems involving inverse functions	Lesson 1.12 Representing Real-Life Situations Using Exponential Functions
Represents real-life situation using exponential functions	
Distinguishes between exponential function, exponential equation, and exponential inequalities	Lesson 1.13 Exponential Functions, Equations and Inequalities

Solves exponential equations and inequalities	Lesson 1.14 Solving Exponential Equations and Inequalities
Represents an exponential function through its: (a) table of values, (b) graph, and (c) equation	Lesson 1.15 Graphing Exponential Functions
Finds the domain and range of an exponential function	
Determines the intercepts, zeroes, and asymptotes of an exponential function	
Solves problems involving exponential functions, equations and inequalities	
Represents real-life situations using logarithmic functions	Lesson 1.16 Introduction to Logarithms
Solve problems involving logarithms	
Distinguishes logarithmic function, logarithmic equation, and logarithmic inequality	Lesson 1.17 Logarithmic Functions, Equations, and Inequalities
Illustrate properties of logarithms	Lesson 1. 18 Basic Properties of Logarithms
Illustrate laws of logarithms	Lesson 1. 19 Laws of Logarithms
Solves logarithmic equations and inequalities	Lesson 1. 20 Solving Logarithmic Equation and Inequalities
Represents a logarithmic function through its: (a) table of values, (b) graph, and (c) equation	Lesson 1. 16 Logarithmic Function and their Graph
Finds the domain and range of logarithmic function	
Determines the intercepts, zeroes, and asymptotes of logarithmic functions	
Solves problems involving logarithmic functions, equations, and inequalities	
SECOND QUARTER	
Illustrates simple and compound interests	Lesson 2.1 Illustrating Simple Interest and Compound Interest
Compute interest, maturity value, future value, and present value in simple interest	Lesson 2.2 Simple Interest
Solves problems involving simple interest	
Compute interest, maturity value, future value, and present value in simple interest and compound interest	Lesson 2.3 Compound Interest
Solves problems involving compound interest	
Illustrates simple and general annuities	Lesson 2.4 Simple Annuity
Finds the future value and present value of simple annuities	
Finds the future value and present value of general annuities	Lesson 2.5 General Annuity
Calculate the fair market value of a cash flow stream that includes an annuity	
Calculates the present and period of deferral of a deferred annuity	Lesson 2.6 Deferred Annuity
Illustrate stocks and bonds	Lesson 2.7 Stocks and Bonds
Describes the different markets for stocks and bonds	Lesson 2.8 Market Indices for Stocks and Bonds

Analyzes the different market indices for stocks and bonds	
Illustrates business and consumer loans	Lesson 2.9 Business Loans and Consumer Loans
Distinguishes between business and consumer loans	
Solves problems involving business and consumer loans (amortization, mortgage)	
Illustrates and symbolizes propositions	Lesson 2.10 Propositions
Distinguishes between simple and compound propositions	
Performs the different types of operations on propositions	Lesson 2.11 Logical Operators
Illustrates the different forms of conditional propositions	Lesson 2.12 Logical Equivalence and Forms of Conditional Propositions
Illustrates the different types of tautologies and fallacies	Lesson 2. 13 Valid Arguments and Fallacies
Determines the validity of categorical syllogisms	
Establishes the validity and falsity of real-life arguments using logical propositions, syllogisms, and fallacies	

Reference:

Soaring 21st Century Mathematics: General Mathematics (2017). Phoenix Publishing House,, Inc.

Time Allotment: Four (4) synchronous sessions (40 minutes per session); Five (5) asynchronous sessions (40 minutes per session)

Promotion/Retention:

- Assessments will be categorized as the following with the corresponding weight:
 - Short Quizzes (20%)
 - Written Outputs (35%)
 - Product and Performance Tasks (45%)
- **Short Quizzes.** These include summative assessments after every lesson, group of related lessons, or chapter.
- **Written Outputs.** These include data recording and analyses, geometric and statistical analyses, graphs, charts, or maps, problem sets, and surveys.
- **Product and Performance Tasks.** These include diagrams, mathematical investigatory projects, models or making models of geometric figures, number representations, constructing graphs from survey conducted, multimedia presentation, outdoor math, probability experiments, problem-posing, reasoning and proof through recitation, using manipulatives to show math concepts or solve problems, and using measuring tools and devices.