

6th grade Academic Math

Grading Period	Unit Name	Unit Summary
1 & 2	Numbers and Operations	This unit focuses on using different sets of numbers to solve problems that arise from mathematical and real-world contexts. Students will represent numbers in different ways and solve problems involving operations with positive rational numbers and integers. They will also compare, order, and locate rational numbers on number lines and coordinate planes.
2 & 3	Proportionality	This unit focuses on proportional relationships including, ratios, rates, and percents. Students will solve problems involving multiple contexts using concrete models, pictorial models, scale factors, tables, and graphs.
3 & 4	Expressions and Relationships	This unit focuses on different representations in mathematics including multiple representations of a number relationship, pattern or problem situation. Students begin to develop an understanding of the difference between an expression and an equation. Students use order of operations and properties to generate equivalent expressions and use words, expressions with variable, tables, graphs and concrete models to represent relationships.
4	Equations and Relationships	This unit focuses on formulating and solving one-variable one-step equations and inequalities that represent problems, including geometric concepts. Students will use a variety of models to solve equations/inequalities and record their actions.
5	Measurement and Data	In this unit students solve problem by collecting, organizing, displaying and interpreting data. Students will summarize categorical data with numerical and graphical summaries and use these summaries to describe the data distribution.
5	Personal Financial Literacy	This unit focuses on checking accounts, debit and credit cards, and various methods to pay for college. Students will compare the features and costs of checking accounts, debit cards, and credit cards including the importance of a positive credit history. Students will investigate various methods to pay for college including savings, grants, scholarships, student loans, and work-study.
6	Linear Relationships	This unit focuses on using integer and positive rational number operations and linear relationships, including proportional relationships, to solve real-world problems that involve concepts such as ratio, rate, percent, and geometry. Students use different representations including verbal descriptions, tables, graphs, and equations to represent linear relationships and solve real world problems. During this unit students will model and find solutions for one-variable one-step equations and inequalities involving geometric and real world concepts.

6th grade Pre-AP/GT Math

Grading Period	Unit Name	Unit Summary
1 & 2	Numbers and Operations	This unit focuses on using different sets of numbers to solve problems that arise from mathematical and realworld contexts. Students will represent numbers in different ways and solve problems involving operations with positive rational numbers and integers. They will also compare, order, and locate rational numbers on number lines and coordinate planes.
2 & 3	Proportionality	This unit focuses on proportional relationships including, ratios, rates, and percents. Students will solve problems involving multiple contexts using concrete models, pictorial models, scale factors, tables, and graphs.
3 & 4	Expressions and Relationships	This unit focuses on different representations in mathematics including multiple representations of a number relationship, pattern or problem situation. Students begin to develop an understanding of the difference between an expression and an equation. Students use order of operations and properties to generate equivalent expressions and use words, expressions with variable, tables, graphs and concrete models to represent relationships.
4 & 5	Equations and Relationships	This unit focuses on formulating and solving one-variable one-step equations and inequalities that represent problems, including geometric concepts. Students will use a variety of models to solve equations/inequalities and record their actions.
5	Measurement and Data	In this unit students solve problem by collecting, organizing, displaying and interpreting data. Students will summarize categorical data with numerical and graphical summaries and use these summaries to describe the data distribution.
5	Personal Financial Literacy	This unit focuses on checking accounts, debit and credit cards, and various methods to pay for college. Students will compare the features and costs of checking accounts, debit cards, and credit cards including the importance of a positive credit history. Students will investigate various methods to pay for college including savings, grants, scholarships, student loans, and work-study.
6	Circles	This unit focuses on solving problems involving circles. Students investigate and develop an understanding of the area and circumference of a circle.
6	Proportional Relationships in Probability	This unit focuses on probability and its use to make decisions in real world situations. Students will use different models to simulate events.

7th grade Academic Math

Grading Period	Unit Name	Unit Summary
1 & 2	Proportionality	This unit focuses on using rational numbers operations and proportional relationships to solve real-world and purely mathematical problems. The students will estimate and find solutions to application problems involving proportional relationships including percent, simple interest and conversions between measurement systems.
2 & 3	Proportional Relationships in Geometry	This unit focuses on solving problems involving proportional relationships in geometric contexts such as scale drawings, circles, and similar figures. Students investigate and develop an understanding of circumference of a circle. Students will also investigate the relationships between similar figures.
3	Proportional Relationships in Probability	This unit focuses on probability and its use to make decisions in real world situations. Students will use different models to simulate events.
3 & 4	Expressions, Equations, and Relationships	This unit focuses on modeling and finding solutions for one-variable two-step equations and inequalities that represent real-world problems including geometric concepts. Students use different representations to explore relationships and solve problems involving real world and geometric concepts.
5	Measurement and Data	This unit focuses on using data to solve problems and make inferences about a population. Students should be able to compare two groups of numeric data and support their conclusions.
5	Personal Financial Literacy	This unit focuses on financial planning. Students will determine a household budget and a net worth statement. Students will also apply the math concepts they have learned to financial contexts such as interest, tax and rebates.
6	Linear Relationships	This unit focuses on students using rational numbers operations and linear relationships, including proportional relationships, to solve real-world problems including geometric concepts. Students will use different representations including verbal descriptions, tables, graphs, and equations to represent linear relationships and solve real world problems. During this unit student will write equations and inequalities involving geometric and real world concepts to represent constraints or conditions.

7th grade Pre-AP/GT Math

Grading Period	Unit Name	Unit Summary
1	Proportionality	The students will estimate and find solutions to application problems involving proportional relationships including percent and simple interest.
1 & 2	Proportional Relationships in Geometry	This unit focuses on solving problems involving proportional relationship in geometric contexts such as similar figures and transformations on two-dimensional figures. Students investigate the relationships between similar figures and describe different transformations of figures using graphs, tables, ordered pairs, and verbal descriptions.
3 & 4	Expressions, Equations, and Relationships	This unit focuses on modeling and finding solutions for one-variable two-step equations and inequalities that represent real-world problems and critical attributes of proportional and non-proportional linear functions in different situations. Students use different representations to explore relationships and solve problems involving real-world concepts and identifying the critical attributes from the tables, graphs, equations, and situations.
4 & 5	Expressions, Equations, and Relationships in Geometry	This unit focuses on properties of three dimensional figures, solving application problems involving surface area and volume, and the effects of transformations on two-dimensional figures. The students will use nets, models, graphs and tables to explore volume and surface area.
5	Data and Probability	This unit focuses on using data and probability to solve problems and make inferences about a population. Students will use different models to simulate events. Students should be able to compare two groups of numeric data and support their conclusions.
5 & 6	Personal Financial Literacy	This unit focuses on financial planning and making financial responsible decisions.. Students will determine a household budget and a net worth statement and will compare different types of investments and loans.. Students will also apply the math concepts they have learned to financial contexts such as interest, tax and rebates.
6	Pythagorean Theorem	This unit focuses on solving problems involving numbers represented in various ways and geometric concepts and the Pythagorean Theorem. Students investigate relationships involving triangles and parallel lines cut by transversals. Students use different representations to explore relationships and solve problems involving real world and geometric concepts including the special relationship between the hypotenuse and the legs of a right triangle (Pythagorean Theorem) and the relationships between similar right triangles (Pythagorean Triples).

8th grade Academic Math

Grading Period	Unit Name	Unit Summary
1	Proportional Relationships in Geometry	This unit focuses on solving problems involving numbers represented in various ways and geometric concepts such as similar figures. Students investigate the attributes of similar figures and the effects of dilations.
1 & 2	Linear Relationships	This unit focuses on critical attributes of proportional and non-proportional linear functions in different situations. Students should be able to identify the critical attributes from the tables, graphs, equations, and situations.
2 & 3	Expressions, Equations, and Relationships	This unit focuses on modeling and finding solutions for one-variable equations and inequalities with variables on both sides that represent real-world problems including geometric concepts. Students use different representations to explore relationships and solve problems involving real world and geometric concepts including the special relationship between the hypotenuse and the legs of a right triangle (Pythagorean Theorem) and the relationships between similar right triangles (Pythagorean Triples).
3 & 4	Two and Three Dimensional Shapes	This unit focuses on properties of three dimensional figures, solving application problems involving surface area and volume, and the effects of transformations on two-dimensional figures. The students will use nets, models, graphs and tables to explore volume and surface area. Students will also describe different transformations of figures using graphs, tables, ordered pairs, and verbal descriptions then compare and contrast the attributes of the transformations.
4	Measurement and Data	This unit focuses on using bivariate linear data to solve problems and make inferences about a population. Students will create scatterplots and use trend lines to make predictions.
5	Personal Financial Literacy	This unit focuses on making financial responsible decisions. Students will compare different types of investments and loans.
5 & 6	Applying Linear Relationships	This unit focuses on proportional and non-proportional linear functions. Students use different representations including tables, graphs, equations, and situations to represent these relationships and solve real world problems. During this unit students will find solutions for one-variable equations and inequalities with variables on both sides that represent real-world problems including geometric concepts.

Algebra 1

Grading Period	Unit Name	Unit Summary
1	Foundations of Functions	This unit focuses on the attributes of linear functions. Students utilize a variety of methods and representations to solve linear equations and inequalities.
1 & 2	Linear Functions	This unit focuses on critical attributes of linear functions in different situations. Students should be able to write and graph linear equations and inequalities when given information and fluently move between the various forms.
2 & 3	Linear Systems	This unit focuses on using attributes of linear graphs to analyze, formulate, and solve systems of linear equations and inequalities using a variety of methods. Students should solve linear systems using graphs, tables, concrete models, and algebraic methods.
3 & 4	Exponential Functions	This unit focuses on analyzing, formulating, and representing the non-linear situation with exponential functions using concrete models, tables, graphs, algebraically, and situations. Students will generate laws of exponents by patterning and use them in problem situations.
4, 5, 6	Quadratic Functions	This unit focuses on mathematical operations involving polynomial expressions and the critical attributes of quadratic functions in different situations. Students should be able to identify and use the critical attributes from tables, graphs, equations, and situations.
6	Preparation for Geometry	This unit focuses on the Algebra 1 topics needed for success in Geometry. Students will review key concepts and apply them in Geometric context.