TX-College Prep Math	Scope and Sequence
Unit Lesson	**Objectives**
Rational Numbers	
Fraction-Decimal-Percent Equivalents	
	Find equivalent forms of fractions, decimals, and percents.
Comparing Rational Numbers	
	Graph rational numbers on a number line.
	Define rational numbers and classify numbers.
	Use a number line to compare rational numbers in a real-world context.
Ordering Rational Numbers	
	Order rational numbers using a number line.
	Write and interpret statements of comparison for rational numbers in real-world contexts.
Solving Problems Involving Rational Numbers	
	Solve real-world and mathematical problems involving addition, subtraction, multiplication, and division with rational numbers.
Estimating with Percents	
	Make use of estimation strategies such as a benchmark percent, approximate fraction, decimal equivalent, or rounded numbers to find the percent of a number in real-world situations.
	Use the distributive property to estimate percents that are more than 100.
	Use estimations to verify the reasonableness of an answer.
Absolute Value	
	Define absolute value.
	Find the absolute value of an integer.
	Compare and order magnitudes using absolute value.

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Represent and compare real-world quantities using absolute value.
	Introduction to Scientific Notation	
		Convert very small or very large numbers between scientific notation and standard notation.
		Order and estimate products and quotients of numbers written in scientific notation.
	Unit Test	
Applying Ratios and Rates		
	Measurements in the Customary System	
		Convert units of measurement in the customary system.
		Solve real-world problems by converting customary measurement units.
	Measurements in the Metric System	
		Convert units of measurement in the metric system.
		Solve real-world problems by converting metric measurement units.
	Converting Measurements between Systems	
		Convert measurement units between the customary and metric systems.
	Understanding Speed	
		Find speed given distance and time.
		Convert measures of speed within a system.
	Solving Speed Problems	
		Find time given distance and speed.
		Find distance given time and speed.
		Compare speeds.

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Percent Increase and Decrease	
		Find the percent change by using the ratio of the change in quantity to the original amount.
		Use percent increase and decrease to solve real-world problems.
	Unit Test	
Expressions		
	Expressions with Unknowns	
		Read and write algebraic expressions.
		Use algebraic expressions to model real-world situations involving addition.
		Use algebraic expressions to model real-world situations involving subtraction.
	Expressions with and without Parentheses	
		Write algebraic expressions containing more than one operation, with and without parentheses.
		Use the order of operations to evaluate algebraic expressions containing more than one operation, with and without parentheses.
	Working with Formulas	
		Evaluate scientific and mathematical formulas for given values.
	Unit Test	
Equations		
	Writing Equations to Find Unknowns	
		Differentiate between expressions and equations.
		Translate simple word problems into one-step equations.
		Use substitution to determine whether a given number is a solution of a one-step equation.
	Solving One-Step Equations:	

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Addition and Subtraction	
		Write and solve one-step addition equations.
		Write and solve one-step subtraction equations.
	Solving One-Step Equations: Multiplication and Division	
		Write and solve one-step multiplication equations.
		Write and solve one-step division equations.
	Modeling Real-World Problems with One-Step Equations	
		Write and solve one-step variable equations modeling real-world contexts involving addition, subtraction, multiplication, and division of nonnegative rational numbers.
	Solving Two-Step Equations	
		Solve two-step equations.
		Solve two-step equations in the real world and interpret the results.
	Solving Multi-Step Equations	
		Solve multi-step equations.
		Solve multi-step equations in the real world and interpret the results.
	Word Problems	
		Create equations to solve a variety of word problems such as mixture, time-distance-rate, and work.
		Solve a variety of word problems, and interpret the solutions in context.
	Unit Test	
Inequalities		
	Writing Inequalities	
		Write inequalities from words, and vice-versa.

TX-College Prep Math	Scope and Sequence
Unit **Lesson**	**Objectives**
	Write inequalities to represent real-world situations.
Graphing Inequalities	
	Graph an inequality.
	Write an inequality from a graph.
Addition and Subtraction Inequalities	
	Solve one-step addition and subtraction inequalities.
	Solve one-step addition and subtraction inequalities in the real world and interpret the results.
Multiplication and Division Inequalities	
	Solve one-step multiplication and division inequalities.
	Solve one-step multiplication and division inequalities in the real world and interpret the results.
Solving Two-Step Inequalities	
	Solve two-step inequalities.
	Solve two-step inequalities in the real world and interpret the results.
Unit Test	
Proportional Relationships	
Graphing Proportional Relationships	
	Graph a proportional relationship from tables and verbal descriptions.
	Identify the meanings of points on the graph of a proportional relationship and determine the characteristics of the graph of a proportional relationship.
Identifying Proportional Relationships	
	Analyze data in tables and graphs to determine if the given relationships are proportional.

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Equations of Proportional Relationships	
		Identify the constant of proportionality from an equation.
		Write an equation to represent a proportional relationship.
		Translate between tables, graphs, and equations to represent proportional relationships.
	Maps	
		Find actual distances, scale distances, and scale factors in situations involving maps.
	Similar Triangles and Slope	
		Interpret similar triangles created by intersecting transversal and parallel lines.
		Find unknown measurements of similar triangles.
		Use similar triangles in the coordinate plane to write linear equations.
	Unit Test	
Cumulative Exam		
	Cumulative Exam Review	
	Cumulative Exam	
Nonlinear Functions		
	Exponential Growth Functions	
		Identify an exponential growth function given tables, graphs, and function rules, determining the rate of change.
		Graph an exponential growth function, and state the domain and range.
		State the domain and range of an exponential growth function.
		Write an exponential growth function to model a real-world problem, pointing out constraints in the modeling context.
	Exponential Decay Functions	

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Identify an exponential decay function given tables, graphs, and function rules, determining the rate of change.
		Graph an exponential decay function, and state the domain and range.
		Write an exponential decay function to model a real-world problem, pointing out constraints in the modeling context.
		Relate exponential growth and decay functions using laws of exponents and reflections over the y-axis.
	Linear Growth vs. Exponential Growth	
		Use tables and graphs to compare the growth of an exponential function vs. a linear function over equal intervals.
		Use tables and graphs to show that exponential functions grow by equal factors over equal intervals.
	Quadratic Functions: Standard Form	
		Graph a quadratic function given in standard form, identifying the key features of the graph.
	Graphing Rational Functions	
		Determine the horizontal asymptotes of a rational function.
		Graph rational functions that have only vertical or horizontal asymptotes.
	Graphing Radical Functions	
		Relate transformations to the graphs of square root and cube root functions to their parent function.
		Determine the domain and range of square root and cube root functions.
	Piecewise Defined Functions	
		Graph piecewise defined functions.
		Evaluate piecewise defined functions.
		Determine the domain, range, and continuity of piecewise defined functions.
	Unit Test	
Data Distributions and Analysis: Part One		

TX-College Prep Math	Scope and Sequence
Unit **Lesson**	**Objectives**
Plotting Data on a Dot Plot	
	Distinguish between statistical and nonstatistical questions.
	Display data on a dot plot.
Describing Data on Dot Plots	
	Describe a data set as shown on a dot plot, using the center, spread, and overall shape.
Representing Data Sets with Histograms	
	Display data on a histogram.
	Describe a data set as shown on a histogram, using the center, spread, and overall shape.
Finding the Mean	
	Calculate the mean of a set of data.
	Explain how the mean of a set of data is a balance point.
	Find a missing value in a set of data given the mean.
Comparing Mean and Median	
	Find the median of a set of data.
	Describe the impact of outliers on the mean and median.
	Choose the most appropriate measure of center to describe a set of data.
Range and Interquartile Range	
	Define and find the range of a set of data.
	Define and find the interquartile range of a set of data.
	Describe the impact of outliers on the range and interquartile range.
Unit Test	
Data Distributions and Analysis: Part Two	

TX-College Prep Math	Scope and Sequence	
Unit	**Lesson**	**Objectives**
	Box Plots	
		Interpret a box plot.
		Create a box plot to represent a set of data, given the summary statistics.
	Data Displays and Statistics	
		Interpret the shape of a data set in the context of the way in which data was collected.
		Describe the impact of the number of observations on the shape of the data.
		Compare two data sets using measures of center and spread.
	Performance Task: Exciting Entertainment	
	Comparing Measures of Center and Variability	
		Analyze two numerical data distributions with similar variation by calculating and comparing the measures of center to the measure of variability.
		Compare the measures of center of two sets of data using a multiple of the measure of variability, expressed as a ratio.
		Draw an informal comparative inference about two sets of data.
	Scatterplots	
		Use linear models to approximate data sets and make predictions.
		Determine the reasonableness of a model and the goodness of fit.
	Representing Data	
		Describe a data set using measures of central tendency and range.
		Determine if a representation of data is misleading.
	Unit Test	
Two-Way Tables and Probability		

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Two-Way Tables	
		Display data in a two-way frequency table given a scenario or Venn diagram, and identify joint and marginal frequencies.
		Calculate relative frequencies and display them in a two-way relative frequency table.
		Interpret joint and marginal relative frequencies in the context of the data.
	Understanding Probability	
		Identify an event with a given probability as impossible, unlikely, likely, or certain.
		Describe the probability of an event as a number between 0 and 1, which represents the likelihood of the event.
		Use the fact that the sum of the probabilities of all possible outcomes is 1 to find the probabilities of complementary events.
	Compound Events and Sample Space	
		Identify the sample space for an experiment involving compound events.
		Determine outcomes in a sample space that represents a given compound event.
	Probability of Compound Events	
		Find probabilities of independent compound events using organized lists, tables, or tree diagrams.
		Find probabilities of dependent compound events using organized lists, tables, or tree diagrams.
	Conditional Probability	
		Use calculations to determine if two events are independent.
		Calculate conditional probabilities using formulas and Venn diagrams.
		Calculate probabilities of compound events.
	Unit Test	

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
Nonlinear Models		
	Complex Numbers	
		Represent square roots of negative numbers as multiples of i.
		Represent complex numbers in the form a + bi or in the complex plane.
		Simplify powers of i using their cyclic nature.
		Determine the absolute value of a complex number.
	Operations with Complex Numbers	
		Identify the field properties of complex numbers.
		Perform addition, subtraction, and multiplication of complex numbers.
	Completing The Square	
		Recognize the pattern of a perfect-square trinomial as the square of a binomial.
		Use the square root property to solve equations.
		Find complex solutions to quadratic equations by completing the square.
	The Quadratic Formula	
		Find real and complex solutions of quadratic equations using the quadratic formula.
		Use the discriminant to determine the number and type of roots of a quadratic equation.
	Modeling with Quadratic Equations	
		Write and solve quadratic equations to model real-world scenarios, estimating where appropriate and identifying solutions that are not viable in terms of the context.
	Comparing Exponential, Linear, and Quadratic Growth	
		Use tables and graphs to compare the growth of an exponential function to the growth of a linear function over equal intervals.
		Use tables and graphs to compare the growth of an exponential function to the growth of a quadratic or a

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
		polynomial function over equal intervals.
		Use tables and graphs to show that exponential functions grow by equal factors over equal intervals.
	Unknown Leg Lengths in Right Triangles	
		Given the length of one leg and the hypotenuse of a right triangle, use the Pythagorean theorem to find the length of the other leg.
		Approximate the length of a leg of a right triangle to solve real-world problems.
	Modeling with Rational Functions	
		Model and solve real-world problems using rational functions.
	Unit Test	
Consumer Debt and Investing		
	Understanding Credit	
		Differentiate between debit cards and credit cards.
		Explain the importance of establishing a positive credit history.
		Identify the information in a credit report and its value to borrowers and lenders.
	Paying Off Debt	
		Analyze debt payment plans.
		Create a plan to pay off consumer debt.
	Debt Management	
		Identify the warning signs of debt problems.
		Evaluate and use the strategies for resolving debt issues.
	Bankruptcy	
		Identify the implications of bankruptcy.

TX-College Prep Math		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Analyze the impact of filing for bankruptcy.
	Consumer Responsibilities	
		Recognize ways to maintain consumer vigilance.
		Solve problems related to predatory lending practices.
	Investing	
		Calculate simple interest and compound interest earnings.
		Apply the rule of 72.
		Compare different investment options for saving money.
	Unit Test	
Cumulative Exam		
	Cumulative Exam Review	
	Cumulative Exam	