| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| **Proportional Reasoning with Ratios and Rates: Part One** | | |
| | Using Ratio Notation | |
| | | Use the notation of ratio language to describe relationships between two quantities. |
| | Equivalent Ratios | |
| | | Analyze patterns in a table of equivalent ratios. |
| | | Find missing values in a table using ratio reasoning. |
| | Comparing Ratios | |
| | | Compare ratios using different strategies. |
| | Understanding Speed | |
| | | Find speed given distance and time. |
| | | Convert measures of speed within a system. |
| | Unit Pricing | |
| | | Find unit prices. |
| | | Solve unit rate problems involving unit pricing. |
| | Unit Rates | |
| | | Use appropriate language to describe ratios and unit rates. |
| | | Use a given unit rate and proportional reasoning to complete a table. |
| | | Use a given unit rate and proportional reasoning to solve problems. |
| | Performance Task: Making Energy Drinks | |
| | Unit Test | |
| **Proportional Reasoning with Ratios and Rates: Part Two** | | |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | 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. |
| | 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. |
| | 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. |
| | Unit Test | |
| **Equivalent Forms of Fractions, Decimals, and Percents** | | |
| | Fraction-Decimal-Percent Equivalents | |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | | Find equivalent forms of fractions, decimals, and percents. |
| | Introduction to Percents | |
| | | Identify an equivalent percent, fraction, or decimal represented in multiple forms. |
| | | Create diagrams to solve for a percent in real-world problems. |
| | | Find the percent of a number using the fraction or decimal equivalent form of a percent to write an expression from a diagram. |
| | Finding a Percent of a Number | |
| | | Solve problems by finding the percent of a number, including amounts of gratuity and tax, by using diagrams and expressions. |
| | | Find the percent of a number when the percent is more than 100. |
| | Finding a Total Amount | |
| | | Solve for the total amount in gratuity, tax, or commission problems by using diagrams and expressions, understanding that it is a process of adding to the original amount. |
| | | Find the total amount, including discounts, understanding that it is a process of subtracting from the original amount. |
| | Unit Test | |
| **Operations with Fractions and Decimals** | | |
| | Rational Numbers | |
| | | Represent positive and negative rational numbers on vertical and horizontal number lines. |
| | | Write a rational number as a decimal that eventually terminates or repeats. |
| | | Describe real-world situations that can be represented by rational numbers, including where opposite quantities combine to make 0. |
| | Multiplying a Fraction by a Whole Number | |
| | | Interpret n × (1/b) as the sum of 1/b + 1/b + … + 1/b (n terms); extend to n × a/b through repeated addition. |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | | Interpret 1/b × n as 1/bth of n by comparing to 1 × n, 2 × n, etc. |
| | | Interpret a/b × n in terms of repeated addition, and compute products of the form n × a/b using that algorithm. |
| | | Real-World Application: Solve real-world problems involving a fraction of a total using multiplication (both unit fractions and otherwise). |
| | Multiplying a Fraction by a Fraction | |
| | | Explain the algorithm for multiplying a/b × c/d through visual representations. |
| | | Explain a/b × c/d as a fractional part of a fraction. |
| | | Multiply fractions and mixed numbers. |
| | | Real-World Application: Solve a variety of problems involving a fractional part of a fraction. |
| | Finding a Rule for Dividing Fractions | |
| | | Use the standard algorithm to divide fractions. |
| | Dividing Fractions | |
| | | Use the rules of signed numbers to divide fractions. |
| | | Apply properties of operations to divide fractions. |
| | | Estimate quotients of fractions. |
| | | Describe real-world contexts for dividing fractions. |
| | Unit Test | |
| **Operations with Integers** | | |
| | Integers on the Number Line | |
| | | Identify integers. |
| | | Graph integers on number lines. |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | | Find the opposite of an integer. |
| | Adding Integers | |
| | | Use visual representations to add integers. |
| | | Apply properties of operations to add integers. |
| | | Describe real-world contexts for adding integers. |
| | Subtracting Integers | |
| | | Use visual representations to subtract integers. |
| | | Use additive inverse and properties of operations to subtract integers. |
| | | Describe real-world contexts for subtracting integers. |
| | Multiplying Integers | |
| | | Use visual representations to multiply integers. |
| | | Apply properties of operations and rules of signed numbers to multiply integers. |
| | | Describe real-world contexts for multiplying integers. |
| | Dividing Integers | |
| | | Use visual representations to divide integers. |
| | | Apply properties of operations and rules of signed numbers to divide integers. |
| | | Describe real-world contexts for dividing integers. |
| | Absolute Value | |
| | | Define absolute value. |
| | | Find the absolute value of an integer. |
| | | Compare and order magnitudes using absolute value. |
| | | Represent and compare real-world quantities using absolute value. |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | Plotting Positive and Negative Fractions | |
| | | Graph negative fractions on a number line. |
| | | Use a number line to compare and order positive and negative fractions. |
| | 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. |
| | Unit Test | |
| **Personal Financial Literacy** | | |
| | Understanding Checking and Debit Accounts | |
| | | Compare checking accounts and debit cards offered by different financial institutions. |
| | | Perform calculations for deposits, withdrawals, and transfers to balance a check register. |
| | 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. |
| | Understanding College Savings | |
| | | Differentiate between various methods to pay for college, including through savings, grants, scholarships, student loans, and work-study. |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | | Analyze situations involving paying for college. |
| | Careers, Salaries, and Lifetime Income | |
| | | Describe factors that influence career decisions. |
| | | Compare annual salaries of different occupations. |
| | | Calculate the effects of different annual salaries on lifetime income. |
| | Understanding Net Worth | |
| | | Differentiate between assets and liabilities. |
| | | Create and interpret a balance sheet. |
| | | Calculate net income and net worth. |
| | Unit Test | |
| **Cumulative Exam** | | |
| | Cumulative Exam Review | |
| | Cumulative Exam | |
| **Equivalent Expressions and One-Variable Equations** | | |
| | Prime Numbers and Prime Factorization | |
| | | List the factors of a number. |
| | | Identify a number as prime or composite. |
| | | Represent a number as the product of its prime factors, using exponents to show repeated factors. |
| | The Distributive Property | |
| | | Use the distributive property to generate equivalent expressions. |
| | Numerical Expressions with Exponents | |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | | Write numerical expressions including expressions containing whole number exponents. |
| | | Evaluate numerical expressions including expressions containing whole number exponents. |
| | Equivalent Expressions and the Distributive Property | |
| | | Generate equivalent expressions using the distributive property. |
| | | Use substitution to determine if two expressions are equivalent. |
| | Determining Equivalent Expressions | |
| | | Determine whether two expressions are equivalent. |
| | | Explain why two expressions are equivalent or not equivalent. |
| | 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: 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. |
| | Writing Equations | |
| | | Write equations from words. |
| | | Write equations to represent real-world situations. |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | Solving Two-Step Equations | |
| | | Solve two-step equations. |
| | | Solve two-step equations in the real world and interpret the results. |
| | Unit Test | |
| **Inequalities** | | |
| | Writing Inequalities | |
| | | Write an inequality to represent a constraint or condition in a real-world or mathematical problem. |
| | | Describe the set of numbers that make the inequality true. |
| | | Write real-world scenarios given one-step inequalities. |
| | Model and Solve One-Variable Inequalities | |
| | | Model real-world and geometric problems using one-step inequalities. |
| | | Solve real-world and geometric problems using one-step inequalities. |
| | Graphing Inequalities on a Number Line | |
| | | Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions. |
| | | Graph solutions of one-step inequalities on number line diagrams. |
| | Solving Two-Step Inequalities | |
| | | Solve two-step inequalities. |
| | | Solve two-step inequalities in the real world and interpret the results. |
| | Inequalities in the Real World | |
| | | Write, solve, and graph inequalities to represent real-world situations. |
| | Unit Test | |

| TX-Advanced Math 6 | Scope and Sequence |
|---|---|
| **Unit Lesson** | **Objectives** |
| **Two- and Three-Dimensional Geometry** | |
| The Coordinate Plane | |
| | Identify the parts of the coordinate plane. |
| | Graph and name points in Quadrant I. |
| Plotting Points in the Four Quadrants | |
| | Graph and name points in all four quadrants. |
| | Identify the quadrant in which a point lies. |
| | Describe the relationship between ordered pairs that differ only in sign. |
| Finding Area on a Coordinate Plane | |
| | Find lengths of sides for rectangles drawn in the coordinate plane. |
| | Calculate the area of a rectangle drawn in the coordinate plane. |
| Area of Parallelograms | |
| | Use the formula A = bh to find the area of a parallelogram. |
| | Solve real-world problems involving the area of parallelograms. |
| Area of Triangles | |
| | Calculate the area of triangles using the formula A = ½bh. |
| | Solve real-world problems involving the area of triangles. |
| Area of Special Quadrilaterals | |
| | Find the area of special quadrilaterals. |
| | Solve real-world problems involving the area of special quadrilaterals. |
| Constructing Triangles | |
| | Construct triangles from given parameters. |

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|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | | Identify whether given parameters create a unique triangle, more than one triangle, or no triangle. |
| | Angle Relationships | |
| | | Name an angle. |
| | | Identify vertical, adjacent, complementary, and supplementary angles. |
| | | Determine congruence in vertical angle relationships. |
| | | Find missing angle measures using angle relationships. |
| | Finding Unknown Angle Measures | |
| | | Use angle relationships to find unknown measures in a figure. |
| | Finding a Formula for the Volume of a Rectangular Prism | |
| | | Use the formulas V = lwh and V = Bh to find the volumes of right rectangular prisms. |
| | Volume of Prisms | |
| | | Calculate volumes of rectangular and triangular prisms. |
| | Unit Test | |
| **Data Analysis: Part One** | | |
| | 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. |
| | Analyzing Dot Plots | |
| | | Informally compare shapes of two different data distributions with similar variations. |
| | | Analyze two dot plots with similar variation by comparing the measures of center. |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | 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. |
| | Data Representation | |
| | | Interpret different types of data displays. |
| | | Identify an appropriate representation for displaying different data sets. |
| | Unit Test | |
| **Data Analysis: Part Two** | | |
| | 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. |
| | Summarizing Data Sets with Statistics | |

| TX-Advanced Math 6 | | Scope and Sequence |
|---|---|---|
| **Unit** | **Lesson** | **Objectives** |
| | | Find the mean, median, range, and interquartile range of a data set. |
| | | Compare two data sets with the same measure of center but different measures of spread. |
| | Box Plots | |
| | | Interpret a box plot. |
| | | Create a box plot to represent a set of data, given the summary statistics. |
| | Comparing Box Plots | |
| | | Compare two data sets with different numbers of data points by comparing two box plots. |
| | | Compare two data sets by comparing the difference in the measures of center and the measures of variability. |
| | | Draw an informal comparative inference about two sets of data. |
| | Circle Graphs | |
| | | Interpret circle graphs. |
| | | Use circle graphs to make predictions. |
| | | Construct a circle graph to display data. |
| | Unit Test | |
| **Cumulative Exam** | | |
| | Cumulative Exam Review | |
| | Cumulative Exam | |