

7th Grade Math

1st Nine Weeks

Rational Numbers (17 days)

- Solve problems using addition, subtraction, multiplication and division of rational numbers
- Describe relationships between sets of rational numbers
- Add, subtract, multiply and divide rational numbers fluently
- Calculate sales tax and income tax for earned wages
- Create an asset and liabilities record and a net worth statement

Proportional Relationships (15 days)

- Represent constant rates of change given table, graph and algebraic representations
- Solve problems involving ratios, rates and percent
- Calculate unit rates from rates
- Determine constant of proportionality
- Convert between measurement systems using proportions and unit rates

Multiple Representations of Linear Relationships (8 days)

- Represent constant rates of change given table, graph, algebraic representation
- Represent linear relationships using verbal description, table, graph and equations
- Determine the constant of proportionality from math and real-world problems

2nd Nine Weeks

Proportionality and Percent (18 days)

- Calculate simple interest and compound interest and compare
- Solve problems involving ratios, rates and percent including percent increase and percent decrease
- Analyze and compare sales, rebates and coupons.
- Identify components of a personal budget, including income, college savings, retirement and emergencies.
- Calculate sales tax for a given purchase and calculate income tax for earned wages

Proportionality and Probability (18 days)

- Solve problems using predictions from simple experiments
- Determine experimental and theoretical probability using data and sample spaces
- Represent sample spaces using lists and tree diagrams
- Make predictions and determine solutions using experimental data for simple and compound events
- Make predictions and determine solutions using theoretical probability for simple and compound events
- Find probability of a simple event and its complement

3rd Nine Weeks

Proportionality and Geometry (9 days)

- Solve problems involving similar shape and scale drawings.
- Describe critical attributes of similarity including ratios within and between similar shapes

Equations and Inequalities (15 days)

- Model and solve one-variable two-step equations and inequalities
- Write one-variable two-step equations and inequalities to represent problems
- Represent solutions on number lines
- Given an equation or inequality, write a real-world problem
- Determine if a given value makes an equation true.

Develop Geometry through Algebra (27 days)

- Determine the area of composite figures without circles
- Write and solve equations using geometry concepts
- Solve problems involving surface area (lateral and total) using a shape's net.
- Solve problems involving volume
- Circumference and area of circles
- Sum of angles in a triangle and angle relationships
- Relationship between volume of a prism and pyramid with the same base. (Rectangle and Triangle)
- Describe pi
- Determine area of composite figures with circles

4th Nine Weeks

Statistics (10 days)

- Measures of Central Tendency
- Box plots including shape, symmetry, and spread
- Interquartile Range
- Comparison/Analysis of 2 box plots
- Dot plots including shape, symmetry, center and spread
- Comparison of dot plots
- Bar graphs
- Circle graphs
- Random sampling including populations, informal and comparative inferences

STAAR Review (15 days)

- Review targeted TEKS from assessed curriculum.
- Utilize data from benchmark to identify weaknesses
- Close gaps

STAAR EXAM on May 13

Abbreviated Bridge to 8th grade

- Targeted teaching to prepare students for 8th grade

7th Grade Math PAP

1st Nine Weeks

Rational Numbers (17 days)

- Solve problems using addition, subtraction, multiplication and division of rational numbers
- Describe relationships between sets of rational numbers
- Add, subtract, multiply and divide rational numbers fluently
- Calculate sales tax and income tax for earned wages
- Create an asset and liabilities record and a net worth statement
- Approximate the value of an irrational number and locate on number line
- Use a visual representation to describe relationships between sets of real numbers

Proportional Relationships (14 days)

- Represent constant rates of change given table, graph and algebraic representations
- Solve problems involving ratios, rates and percent
- Calculate unit rates from rates
- Determine constant of proportionality
- Convert between measurement systems using proportions and unit rates
- Graph proportional relationships interpreting the unit rate as the slope
- Represent linear proportional situations with tables, graphs and equations
- Solve problems involving direct variation

Red is the accelerated 8th grade content.

2nd Nine Weeks

Multiple Representations of Linear Relationships (10 days)

- Represent linear relationships using verbal description, table, graph and equations
- Use data from a table or graph to determine slope
- Identify functions using ordered pairs, tables, mappings and graphs
- Write an equation in the form $y = mx + b$ to model a linear relationship
- Represent linear non-proportional situations with tables, graphs and equations
- Identify examples of and distinguish between proportional and non-proportional functions from real world.

Proportionality and Percent (18 days)

- Calculate simple interest and compound interest and compare
- Solve problems involving ratios, rates and percent including percent increase and percent decrease
- Analyze and compare sales, rebates and coupons.
- Identify components of a personal budget, including income, college savings, retirement and emergencies.
- Calculate sales tax for a given purchase and calculate income tax for earned wages

Proportionality and Probability (18 days)

- Solve problems using predictions from simple experiments
- Determine experimental and theoretical probability using data and sample spaces
- Represent sample spaces using lists and tree diagrams
- Make predictions and determine solutions using experimental data for simple and compound events
- Make predictions and determine solutions using theoretical probability for simple and compound events
- Find probability of a simple event

3rd Nine Weeks

Equations and Inequalities (18 days)

- Model and solve one-variable two-step equations and inequalities
- Write one-variable two-step equations and inequalities to represent problems with rational number coefficients and constants
- Represent solutions on number lines
- Given an equation or inequality, write a real-world problem with variables on both sides and rational number coefficients and constants.
- Determine if a given value makes an equation true.
- Model and solve one variable two step equations with variables on both sides with rational number coefficients and rational number constants

Similarity (11 days)

- Solve problems involving similar shape and scale drawings.
- Describe critical attributes of similarity including ratios within and between similar shapes
- Use an algebraic representation to show scale factor
- The ratio of similar shapes corresponding sides is proportional
- Attributes of a shape and its dilation on coordinate plane

4th Nine Weeks

Geometry and Measurement (26 days)

- Solve problems involving surface area (lateral and total) using a shape's net.
- Solve problems involving volume
- Circumference and area of circles
- Sum of angles in a triangle and angle relationships
- Relationship between volume of a prism and pyramid with the same base. (Rectangle and Triangle)
- Determine area of composite figures with circles
- Model the effect on linear and area measurements on dilated 2-d shapes

Statistics (11 days)

- Measures of Central Tendency
- Box plots including shape, symmetry, and spread
- Interquartile Range
- Comparison/Analysis of 2 box plots
- Dot plots including shape, symmetry, center and spread, bar graphs, circle graphs
- Random sampling including populations, informal and comparative inferences
- Construct a scatterplot
- Use a trend line to make predictions

STAAR Review (15 days)

- Review targeted TEKS from assessed curriculum.
- Utilize data from benchmark to identify weaknesses
- Close gaps

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- Targeted teaching to prepare students for 8th grade