

Math Content by Unit

| Grade 6 | Grade 7 | Grade 8 | Algebra |
|--|---|--|---|
| <p>Prime Time: Factors and Multiples Number theory, including factors, multiples, primes, composites, prime factorization; order of operations, distributive property.</p> | <p>Shapes and Designs: Two Dimensional Geometry Polygons, measurement of angles, angle sum of polygons, conditions for unique triangle, parallel lines and transversals.</p> | <p>Thinking with Mathematical Models: Linear and Inverse Variations Linear models and equations, inverse variation models and equations, variability of numerical and categorical data.</p> | <p>Thinking with Mathematical Models: Linear and Inverse Variations Linear models and equations, inverse variation models and equations, variability of numerical and categorical data.</p> |
| <p>Comparing Bits and Pieces: Ratios, Rational Numbers and Equivalence Ratio, unit rate, rate tables, rational numbers, decimals, percents, equivalence, absolute value, number line.</p> | <p>Accentuate the Negative: Integers and Rational Numbers Addition, subtraction, multiplication and division of rational numbers, absolute value, opposites, order of operations, distributive property.</p> | <p>Looking for Pythagoras: The Pythagorean Theorem Use and proof of Pythagorean Theorem and converse, square roots, cube roots, irrational and real numbers, equation of circle.</p> | <p>Looking for Pythagoras: The Pythagorean Theorem Use and proof of Pythagorean Theorem and converse, square roots, cube roots, irrational and real numbers, equation of circle.</p> |
| <p>Let's be Rational: Understanding Fraction Operations Addition, subtraction, multiplication, division of fractions, fact families.</p> | <p>Stretching and Shrinking: Understanding Similarity Enlarging a figure, effect of scale factors on perimeter and area, coordinate rules, ratios between and within similar figures; using similarity to find measures.</p> | <p>Growing, Growing, Growing: Exponential Functions Representing exponential growth with tables, graphs, equations; rules for exponents, scientific notation; Exponential Decay; growth/decay factors and rates</p> | <p>Growing, Growing, Growing: Exponential Functions Representing exponential growth with tables, graphs, equations; rules for exponents, scientific notation; Exponential Decay; growth/decay factors and rates.</p> |
| <p>Covering and Surrounding: Two Dimensional Measurement</p> | <p>Comparing and Scaling: Ratios, Rates, Percent, Proportions</p> | | <p>Frogs and Fleas and Painted Cubes: Quadratic Functions Representing quadratic functions, factoring</p> |

Area and perimeter relationships, area and perimeter of polygons, surface area and volume of rectangular prisms.

Decimal Ops: Computing with Decimals and Percepts
Addition, subtraction, multiplication and division of decimals, estimation; solutions for $a\%$ of $b = c$

Variables and Patterns: Focus on Algebra
Variables, variable expressions, equations, inequalities; representations of relationships in tables, graphs, equations.

Data About Us: Statistics and Data Analysis
Analysis of data distributions, including shape, measures of center (mean, median, mode) and variability (range, inter quartile range, mean absolute deviation).

Rates, unit rate, rate tables, constant of proportionality, solving proportions, Inc. markups, discounts, commission, measurement, conversion.

Moving Straight Ahead: Linear Relationships
Representing linear relationships in graphs, tables, equations; solving linear equations; slope, intercept, writing equation for linear relationship given points.

What Do You Expect: Probability and Expected Value
Probability models, experimental and theoretical probability, analysis of compound events.

Filing and Wrapping: Three Dimensional Measurement
Area circumference of circle; volume and surface area of rectangular and polygonal prisms, cylinders; volume of pyramids, cones, spheres, plane sections of prism, pyramids; effect of scaling on surface area and volume.

Say it with Symbols: Making Sense of Symbols
Equivalent expressions, solving linear and quadratic equations; identify and represent linear, exponential and quadratic functions.

Butterflies, Pinwheels and Wallpaper: Symmetry and Transformations
Symmetry, transformations, congruence, similarity, coordinate proofs.

It's in the System: Systems of Linear Equations and Inequalities
Solving linear systems graphically and algebraically, systems of functions and inequalities, solving systems of linear inequalities.

quadratic expressions, patterns of change, effect of parameters.

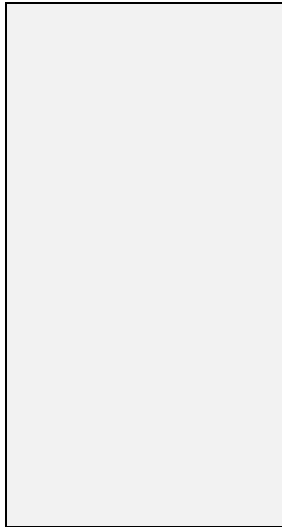
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**Samples and Populations:
Making Comparisons and Predictions**
Sampling plans, effect of sample size, predicting populations statistics, simulations, comparing sample statistics to draw inferences about two populations.



**Function Junction:
Families of Functions**
Function notation, inverses, arithmetic/geometric sequences, transformations on functions; completing the square, quadratic formula, polynomial expressions/functions/equations