

## Math 6

State Standard Number	State Standard Area/Description	Unit Name	Course Topic Description
N	Number Sense, Properties, and Operations		
N.1	In the real number system, positive rational numbers are represented in multiple equivalent forms	Connect Percents, Decimals and Fractions	Throughout Unit
N.1.a	Read, write, compare, convert and order positive rational numbers in a variety of forms including proper and improper fractions, mixed numbers, decimals, and percents	Converting Fractions and Decimals Connect Percents, Decimals, and Fractions	Comparing and Ordering Fractions and Decimals Throughout Unit
N.1.b	Express whole numbers as products of prime factors with exponents and use prime factorization to find the greatest common factor and least common multiple of two numbers	Greatest Common Factor Adding and Subtracting Unlike Fractions Factors	Throughout Unit Least Common Denominator (LCM) Prime Factorization
N.1.c	Express the quotient and remainder of a whole number division problem ( $a/b$ or $a \div b$ ) using fractions, terminating decimals, or repeating decimals	Converting Fractions and Decimals	Converting Fractions to Decimals
N.1.d	Locate positive fractions and decimals on a number line		
N.2	Formulate, represent, and use algorithms with positive rational numbers flexibly, accurately, and efficiently	Throughout Course	Throughout Course
N.2.a	Model and compute the addition, subtraction, multiplication and division of positive fractions, decimals, and combinations of fractions and decimals	Adding and Subtracting Like Fractions Multiplying Fractions Dividing Fractions	Throughout Units
N.2.b	Solve multi-step word problems involving fractions, decimals and whole numbers		
N.2.c	Estimate sums, differences, products and quotients of rational numbers using common fractions, common decimals, and whole numbers		

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N.2.d	Compare and round positive numbers from thousandths through millions		
N.3	Quantities can be expressed and compared using ratios and rates	Rates and Proportions	Throughout Unit
N.3.a	Apply the multiplicative identity to create equivalent fractions and to reduce fractions to simplest form		
N.3.b	Express the comparison of two whole number quantities using differences, part-to-part ratios, and part-to-whole ratios in real contexts, including investing and saving		
N.3.c	Compute unit rates in real-world situations involving mixtures, concentrations, and distance-time relationships		
P	Patterns, Functions, and Algebraic Structures		
P.1	Patterns can be described using words, tables, and graphs	Patterns	Throughout Unit

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P.1.a	Extend the pattern and describe the rule for arithmetic and geometric sequences	Patterns	Throughout Unit
P.1.b	Model linear situations using tables and graphs, and convert between these two representations	Analyze Data	Throughout Unit
P.1.c	Given a linear equation, substitute non-negative input values to create a table and graph coordinate points in the first quadrant	Coordinate Geometry	Throughout Unit
P.2	Variables are used to represent unknown quantities		
P.2.a	Describe patterns by using words and variables with mathematical symbols		
P.2.b	Evaluate expressions by substituting whole number values for variables		
D	Data Analysis, Statistics, and Probability		
D.1	Questions can be answered by collecting and analyzing data and data displays	Analyze Data	Throughout Unit

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D.1.a	Formulate questions for populations larger than the classroom		
D.1.b	Recognize that a sample may not represent a population accurately		
D.1.c	Recognize bias in surveys		
D.1.d	Utilize appropriate techniques to design a random sample		
D.1.e	Recognize the use of deceptive scales on a graph that make differences look much larger than they are, or the use of pictographs with areas that are proportioned incorrectly		
D.2	Mathematical models are used to determine probability		
D.2.a	Determine probabilities through experiments or simulations		
D.2.b	Express the probability of an event using fractions, decimals, and percents	Probability	Throughout Unit

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D.2.c	Make a table, tree diagram or an organized list to determine possible outcomes of two or more compound events	Tree Diagrams	Throughout Unit
D.2.d	Predict outcomes of events using experimental and theoretical probabilities		
S	Shape, Dimension, and Geometric Relationships		
S.1	Polygons can be described, classified, and analyzed by their attributes	Polygons	Throughout Unit
S.1.a	Develop and apply formulas and procedures for finding area of triangles, parallelograms, and trapezoids		
S.1.b	Describe properties of polygons up to ten sides using accurate vocabulary and notation	Polygons	Names of Polygons (interactive chart)
S.1.c	Classify triangles and apply angle and side properties, including the sum of the interior angles		
S.1.d	Use accurate geometric notation to describe angles, lines, and segments	Classify Lines Classify and Measure Angles	Throughout Units

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S.2	Standard units provide common language for communicating measurements	Conversions	Throughout Unit
S.2.a	Connect metric prefixes to place value		
S.2.b	Measure to the nearest sixteenth of an inch		
S.2.c	Select and use appropriate units to accurately measure length, weight, capacity and time in problem-solving situations	Conversions	Throughout Unit
S.2.d	Use a protractor to measure angles to the nearest degree	Classify and Measure Angles	Measuring Angles