

**Grade: 6**

## Strand: Problem Solving

- 1 **Topic:** Appropriate Methods and Tools, Applications  
**Standard:** Solves problems, reasons, and estimates throughout mathematics. - Selects and uses problem-solving strategies such as reading the problem, drawing a picture or diagram, using trial and error, making a table or chart, looking for patterns, making a simple problem then generalizing, working backwards, etc. -Selects and uses appropriate tools (such as mental computation, calculators, manipulative materials, paper and pencil, computer) in solving problems. -Uses appropriate estimation strategies (such as breaking numbers apart, compatible numbers, guess and check, clustering, rounding, compensation) to check the reasonableness of results. -Solves nonroutine problems for which the answer is not obvious. -Relates concepts and skills to practical applications.
- 2 **Topic:** Vocabulary  
**Standard:** Describes orally and in writing, using the appropriate mathematical vocabulary, mathematical concepts and procedures, such as the reasoning involved in solving problems or computing.
- 3 **Topic:** Pattern, Sequence  
**Standard:** Uses scientific calculator and computer skills to solve problems, to discover patterns and sequences, to investigate situations and to draw conclusions.
- 4 **Topic:** Research, Investigation, Data Analysis  
**Standard:** Uses computer software and applications to research, investigate, and analyze data and to represent this information using charts, tables, graphs, or other presentation forms.

## Strand: Patterns &amp; Relationships; Algebra

- 5 **Topic:** Variable  
**Standard:** Uses a variable to represent an unknown amount in a mathematical expression or equation (number sentence), and evaluates simple algebraic expressions (e.g., given  $a + 4$ . If  $a = 2$ , then  $2 + 4 = 6$ ).
- 6 **Topic:** Order of Operations, Parentheses  
**Standard:** Uses order of operations to simplify numeric expressions that involve addition and subtraction with and without parenthesis.
- 7 **Topic:** Variable  
**Standard:** Finds the value of or solves for the variable in a simple algebraic equation such as  $a + 6 = 10$ .
- 8 **Topic:** Problem Solving, Equations  
**Standard:** Writes and solves a simple one-step equation (number sentence) for a given word problem.

## Strand: Whole Number Computation; Estimation; Whole Number Operations

- 9 **Topic:** Appropriate Methods  
**Standard:** Uses addition, subtraction, multiplication, and division (interpreting remainders in context of problem) in computation and problem solving with whole numbers, decimals, fractions, and mixed numbers with like and unlike denominators.

- 10** **Topic:** Multiplies, Compensation, Compatible Numbers  
**Standard:** Performs computations mentally using strategies such as multiples of ten, compatible numbers, compensation, or breaking apart numbers.
- 11** **Topic:** Ratio, Proportion  
**Standard:** Computes percent of a number using ratio, proportions, and equations.

## Strand: Geometry & Spatial Sense; Measurement

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- 12** **Topic:** Parallel, Perpendicular, Vertical, Intersecting, Horizontal  
**Standard:** Uses characteristics and properties of lines and line segments to determine relationships between lines.
- 13** **Topic:** Angle Components, Angle Types  
**Standard:** Identifies the component parts of an angle, its vertex, and sides or rays; and classifies angles as acute, right, obtuse, or straight.
- 14** **Topic:** Symmetry, Line of Symmetry  
**Standard:** Identifies lines of symmetry.
- 15** **Topic:** Solids  
**Standard:** Identifies face, edge, and vertex of a geometric solid.
- 16** **Topic:** Congruence, Similarity  
**Standard:** Identifies congruent and similar geometric figures.
- 17** **Topic:** Rotation (Turn), Reflection (Flip), Translation (Slide)  
**Standard:** Identifies effects of basic transformations on geometric shapes.
- 18** **Topic:** Solid Figure, Plane Figure, Geometric Properties, Classifying  
**Standard:** Contrasts and classifies simple plane and solid geometric figures by their properties.
- 19** **Topic:** Ordered Pair, Coordinate Plane  
**Standard:** Locates, names, and graphs an ordered pair of numbers on a coordinate plane.
- 20** **Topic:** Diameter, Radius, Circumference  
**Standard:** Identifies terms associated with a circle and finds the circumference using pi.
- 21** **Topic:** Length, Perimeter, Area, Volume/Capacity, Time, Temperature, Weight/Mass  
**Standard:** Selects and uses appropriate customary and metric units of measure for length (including perimeter), area, volume, capacity, time, temperature, and weight/mass.
- 22** **Topic:** Degree, Protractor  
**Standard:** Measures angles using a protractor.
- 23** **Topic:** Length, Capacity, Weight, Mass  
**Standard:** Converts from one metric unit to another metric unit, and from one customary unit to another customary unit (length, capacity, weight/mass).
- 24** **Topic:** Reasonableness of Results  
**Standard:** Estimates measures using strategies such as walking off or pacing, rough comparison, and reference point for length or capacity, and evaluates reasonableness of results.
- 25** **Topic:** Parallelogram, Square, Rectangle, Triangle, Rectangular Form  
**Standard:** Develop and apply formulas for area, perimeter, and volume.

## Strand: Number Sense & Numeration; Fractions & Decimals

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- 26** **Topic:** Place Value, Standard Notation  
**Standard:** Reads and writes numbers through trillions, in both numerical and word forms.
- 27** **Topic:** Place Value, Equivalent Representations  
**Standard:** Writes numerals, up to the thousands, in expanded and standard notation interchangeably.
- 28** **Topic:** Place Value  
**Standard:** Identifies place value for whole numbers (trillions) and decimals (millionths).
- 29** **Topic:** Part of a Whole Models  
**Standard:** Uses concrete and visual models to represent parts of a whole for fractions, decimals, and percents.
- 30** **Topic:** Equivalent Representations  
**Standard:** Uses fractions, decimals, and percents interchangeably (e.g.,  $\frac{1}{4}$ , .25, 25%).
- 31** **Topic:** Rounding  
**Standard:** Rounds fractions and decimals to the nearest whole number, and rounds whole numbers and decimals to nearest million(th).
- 32** **Topic:** Equivalent Representations  
**Standard:** Changes improper fractions to mixed numbers and changes mixed numbers to improper fractions.
- 33** **Topic:** Equivalent Representations  
**Standard:** Converts a decimal to a whole number multiplied by a power of ten (scientific notation).
- 34** **Topic:** Symbol, Equality, Inequality  
**Standard:** Identifies and uses symbols of equality and inequality.
- 35** **Topic:** Number Line, Ordering  
**Standard:** Compares and orders whole numbers, integers, fractions, and decimals, using a number line when appropriate.
- 36** **Topic:** Equivalent Representations  
**Standard:** Uses a ratio to compare two quantities such as 1:2,  $\frac{1}{2}$ , or 1 to 2. (Not introduced prior to this.)
- 37** **Topic:** Equivalence, Equivalent Representations  
**Standard:** Expresses equivalent ratios as a proportion (e.g.,  $\frac{1}{2} = \frac{4}{8}$ ).
- 38** **Topic:** Number Line  
**Standard:** Represents practical problem situations using integers (e.g., temperature above and below zero, directions, loss, or gain).
- 39** **Topic:** Even, Odd, Prime, Composite  
**Standard:** Identifies numbers as odd, even, prime, and composite.
- 40** **Topic:** GCF, LCM, Multiple, Factor, Prime Factorization  
**Standard:** Identifies and uses prime factors in practical applications, writes the prime factorization for a composite number, finds the multiples of a given number, and finds the greatest common factor and least common multiple of a set of numbers.
- 41** **Topic:** Communication  
**Standard:** Uses divisibility rules for 2, 3, 5, and 10.
- 42** **Topic:** Associative, Commutative, Distributive, Identity, Inverse, Reciprocal, Properties of Zero  
**Standard:** Recognizes and uses the commutative and associative properties of addition and multiplication, the distributive property, identities, inverses (including reciprocals), and properties of zero.

## Strand: Patterns & Relationships; Algebra

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- 43**     **Topic:** Sequences, Patterns  
**Standard:** Recognizes, describes, and generalizes patterns and sequences.

## Strand: Statistics & Probability

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- 44**     **Topic:** Event, Experiment  
**Standard:** Identifies possible outcomes of a simple experiment and predicts or describes probability of a given event.
- 45**     **Topic:** Experimental Outcome, Theoretical Probability  
**Standard:** Explores the relationship between actual outcomes (experimental probability) and expected outcomes (theoretical probability).

## Strand: Problem Solving

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- 46**     **Topic:** Extraneous or Insufficient Information  
**Standard:** Selects and uses appropriate problem-solving strategies, determines operations to use and whether problems contain extraneous or insufficient information.
- 47**     **Topic:** Problem Solving  
**Standard:** Solves problems using one or two operations.

## Strand: Statistics & Probability

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- 48**     **Topic:** Currency  
**Standard:** Uses currency in practical problem solving.

## Strand: Problem Solving

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- 49**     **Topic:** Proportion  
**Standard:** Uses proportion to solve problems.

## Strand: Statistics & Probability

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- 50**     **Topic:** Data Collection, Data Organization, Data Display, Scale  
**Standard:** Collects and organizes data, and determines appropriate method and scale to display data.
- 51**     **Topic:** Data Collection, Data Organization  
**Standard:** Constructs tables, charts, pictographs and bar, circle, and simple line graphs to display data.
- 52**     **Topic:** Mean, Median, Mode, Range  
**Standard:** Finds median, mean, mode, and range of a given set of data.
- 53**     **Topic:** Data Interpretation, Prediction, Data Display  
**Standard:** Reads, interprets, and makes predictions based on data displays.

**Grade: 7**

## Strand: Problem Solving

- 1** **Topic:** Problem Solving Strategies, Reasoning, Estimation Strategies, Mental Computation  
**Standard:** Solves problems, reasons, and estimates throughout mathematics. - Selects and uses problem-solving strategies such as reading the problem, drawing a picture or diagram, using trial and error, making a table or chart, looking for patterns, making a simpler problem and then generalizing, working backwards, etc. - Selects and uses appropriate tools (such as mental computation, calculators, manipulative materials, paper and pencil, computer) in solving problems. - Uses appropriate estimation strategies (such as front-end, breaking numbers apart, compatible numbers, guess and check, clustering, rounding, compensation) to check the reasonableness of results. - Solves nonroutine problems for which the answer is not obvious. - Relates concepts and skills to practical applications.
- 2** **Topic:** Communication, Reasoning  
**Standard:** Describes orally and in writing, using the appropriate mathematical vocabulary, mathematical concepts and procedures, such as solving a word problem or computing.
- 3** **Topic:** Technology, Calculator Skills, Computer Skills, Problem Solving, Reasoning  
**Standard:** Uses scientific calculator and computer skills to solve problems, to discover patterns and sequences, to investigate situations and to draw conclusions.
- 4** **Topic:** Technology, Computer Skills, Charts, Tables, Graphs  
**Standard:** Uses computer software and applications to research, investigate, and analyze data and to represent this information using charts, tables, graphs, or other presentation forms.

## Strand: Patterns &amp; Relationships; Algebra

- 5** **Topic:** Expressions, Equations, Inequalities  
**Standard:** Identifies the use of a variable as a placeholder in an algebraic expression or equation.
- 6** **Topic:** Expressions  
**Standard:** Evaluates algebraic expressions (e.g., Given  $3a + 4$ . If  $a = 2$ , then  $3(2) + 4 = 10$ ).
- 7** **Topic:** Equations, Inequalities  
**Standard:** Writes and solves one-step algebraic equations and inequalities using addition, subtraction, multiplication, and division (e.g.,  $a + 11 = 15$ ;  $b - 2 = 21$ ;  $m/2 = 15$ ;  $5x = 40$ ).
- 8** **Topic:** Inequalities, Graphing  
**Standard:** Graphs inequalities on a number line.
- 9** **Topic:** Expressions  
**Standard:** Uses order of operations to simplify numerical expressions that involve addition, subtraction, multiplication, and division, with and without parentheses.
- 10** **Topic:** Proportion  
**Standard:** Solves for the missing term in a proportion.
- 11** **Topic:** Expressions, Equations  
**Standard:** Translates English phrases and sentences into mathematical expressions, equations, and inequalities.

- 12** **Topic:** Variables  
**Standard:** Determines how changes in one variable can affect another variable (e.g., Given  $b = 2a$ . If  $a = 2$ , then  $b = 4$ . If  $a = 3$ , then  $b = 6$ ).
- 13** **Topic:** Problem Solving, Equations  
**Standard:** Writes and solves an equation for a given word problem.

## Strand: Whole Number Computation; Estimation; Whole Number Operations

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- 14** **Topic:** Whole Numbers, Fractions, Decimals, Computation, Problem Solving  
**Standard:** Uses addition, subtraction, multiplication, and division (interpreting remainders in context of problem) in computation and problem solving with whole numbers, fractions, and decimals.
- 15** **Topic:** Integers  
**Standard:** Computes with integers using models, manipulatives, and/or rules.
- 16** **Topic:** Mental Computation Strategies  
**Standard:** Performs computations mentally using strategies such as multiples of tens, powers of ten, compensation, breaking apart numbers, or compatible numbers.

## Strand: Geometry & Spatial Sense; Measurement

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- 17** **Topic:** Angles  
**Standard:** Classifies angles as acute, right, obtuse, or straight; and names angles using points, numbers, and letters.
- 18** **Topic:** Quadrilaterals, Triangles  
**Standard:** Classifies quadrilaterals and triangles based on their properties.
- 19** **Topic:** Geometric Figures  
**Standard:** Contrasts and classifies plane and solid geometric figures (polygons, cones, cylinders, prisms, pyramids).
- 20** **Topic:** Geometric Figures  
**Standard:** Compares and contrasts geometric figures with respect to congruency and similarity (scaling, dilations).
- 21** **Topic:** Transformations  
**Standard:** Analyzes effects of basic transformations on geometric shapes.
- 22** **Topic:** Graphing, Integers  
**Standard:** Identifies and graphs an ordered pair of integers on a four-quadrant coordinate plane.
- 23** **Topic:** Prisms, Cylinders  
**Standard:** Finds volume and surface area of prisms and cylinders.
- 24** **Topic:** Circles, Polygons, Geometric Solids, Formulas  
**Standard:** Finds the perimeter (or circumference) and area of polygons and circles, and the volume and surface area of geometric solids using formulas. (Uses student development of formulas when possible.)
- 25** **Topic:** Customary Units, Metric Units  
**Standard:** Selects and uses appropriate customary and metric units of measure for length (including perimeter and circumference), area, volume, capacity, weight/mass, time, temperature, and angle measure.
- 26** **Topic:** Angle Measurement  
**Standard:** Measures angles using a protractor.
- 27** **Topic:** Customary Units, Metric Units, Conversion within System  
**Standard:** Converts from one metric unit to another metric unit and from one customary unit to another customary unit (length, capacity, weight/mass, time, and money).

## Strand: Number Sense & Numeration; Fractions & Decimals

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- 28** **Topic:** Fractions, Decimals, Integers, Percent  
**Standard:** Compares and orders whole numbers, integers, fractions, decimals, and percents.
- 29** **Topic:** Fractions, Decimals, Percents  
**Standard:** Uses fractions, decimals, and percents interchangeably (e.g.,  $\frac{1}{4}$ , .25, 25%) and recognizes equivalent representations.
- 30** **Topic:** Computation, Mental Computation, Properties of Real Numbers  
**Standard:** Applies properties of addition and multiplication to facilitate computation, particularly mental computation.
- 31** **Topic:** Number Theory  
**Standard:** Identifies factors, multiples, primes, and composites.
- 32** **Topic:** Postitive Integers  
**Standard:** Writes a given positive integer as the product of a unique set of prime factors (prime factorization).
- 33** **Topic:** Positive Integers  
**Standard:** Identifies greatest common factor and least common multiple.
- 34** **Topic:** Divisibility  
**Standard:** Uses divisibility rules for 2, 3, 5, 6, 9, and 10.
- 35** **Topic:** Real Numbers  
**Standard:** Identifies subsets of the real numbers and determines all subsets of which a given number is an element (e.g., 9 is a whole number, a natural number, an integer, and a rational number).

## Strand: Statistics & Probability

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- 36** **Topic:** Simple Probability  
**Standard:** Identifies possible outcomes of simple experiments and predicts or describes the probability of a given event expressed as a rational number from 0 through 1.
- 37** **Topic:** Compound Probability  
**Standard:** Conducts and interprets a compound probability experiment.

## Strand: Problem Solving

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- 38** **Topic:** Problem Solving Strategies  
**Standard:** Selects and uses appropriate problem-solving strategies to solve single- and multiple-step problems.
- 39** **Topic:** Proportion  
**Standard:** Uses proportions to solve problems involving constant rate.
- 40** **Topic:** Percent  
**Standard:** Solves practical problems using percents (e.g., sales tax, sale price and commission, discounts).

## Strand: Statistics & Probability

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- 41** **Topic:** Charts, Tables, Graphs, Distributions  
**Standard:** Collects, organizes data, determines appropriate method and scale to display data, and constructs frequency distributions, bar graphs, line graphs, circle graphs, tables, and charts.

**42** **Topic:** Measures of Central Tendency and Spread

**Standard:** Uses mean, median, and mode to describe central tendencies of a data set, and uses range to describe spread of the data.

**43** **Topic:** Charts, Tables, Graphs, Distributions

**Standard:** Reads and interprets data in frequency distributions, diagrams, charts, tables, and graphs; and makes predictions or conclusions based on this data.



**Grade: 8**Strand: Problem Solving

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- 1**     **Topic:** Appropriate Methods and Tools, Applications  
**Standard:** Solves problems, reasons, and estimates throughout mathematics. - Selects and uses problem-solving strategies such as reading the problem, drawing a picture or diagram, using trial and error, making a table or chart, looking for patterns, making a simple problem then generalizing, working backwards, etc. - Selects and uses appropriate tools (such as mental computation, calculators, manipulative materials, paper and pencil, computer) in solving problems. - Uses appropriate estimation strategies (such as breaking numbers apart, compatible numbers, guess and check, clustering, rounding, compensation) to check the reasonableness of results. - Solves nonroutine problems for which the answer is not obvious. - Relates concepts and skills to practical applications.
- 2**     **Topic:** Vocabulary  
**Standard:** Describes orally and in writing, using the appropriate vocabulary, mathematical concepts and procedures, such as solving a word problem or computing.
- 3**     **Topic:** Pattern, Sequence  
**Standard:** Uses scientific calculator and computer skills to solve problems, to discover patterns and sequences, to investigate situations and draw conclusions.
- 4**     **Topic:** Research, Investigation, Data Analysis  
**Standard:** Uses computer software and applications to research, investigate, and analyze data and to represent this information using charts, tables, graphs, or other presentation forms.

Strand: Patterns & Relationships; Algebra

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- 5**     **Topic:** Symbol, Variable, Equality, Inequality  
**Standard:** Uses signs or symbols to represent words, phrases, numbers, or quantities.
- 6**     **Topic:** Variable, Symbol, Solving Equation  
**Standard:** Translates English phrases and sentences into mathematical/ algebraic expressions, equations, and inequalities.
- 7**     **Topic:** Variable  
**Standard:** Determines the number that makes a given number sentence true using the properties of equations.
- 8**     **Topic:** Order of Operations  
**Standard:** Uses order of operations to simplify numerical expressions.
- 9**     **Topic:** Variable  
**Standard:** Evaluates algebraic expressions using substitution.
- 10**    **Topic:** Variable  
**Standard:** Solves single- and multi-step equations (including formulas) and inequalities using addition, subtraction, multiplication, and division.
- 11**    **Topic:** Absolute Value  
**Standard:** Finds the absolute value of any real number.

- 12** **Topic:** Variable  
**Standard:** Sets up a proportion and solves for the missing term in a proportion.
- 13** **Topic:** Number Line  
**Standard:** Graphs simple and compound inequalities on a number line.
- 14** **Topic:** Variable, Dependent, Independent  
**Standard:** Examines relations (functions) to determine how changes in one variable can affect another variable (e.g., given  $b = 2a$ . If  $a = 2$ , then  $b = 4$ . If  $a = 3$ , then  $b = 6$ ).
- 15** **Topic:** Problem Solving  
**Standard:** Writes and solves an equation or simple inequality for a given word problem.
- 16** **Topic:** Perimeter, Area, Circumference, Volume, Surface Area  
**Standard:** Applies formulas (e.g., area, perimeter, circumference, volume, surface area), including investigating and using the Pythagorean Theorem.

## Strand: Whole Number Computation; Estimation; Whole Number Operations

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- 17** **Topic:** Rational Numbers  
**Standard:** Adds, subtracts, multiplies, and divides integers and other rational numbers.
- 18** **Topic:** Multiples, Powers, Compensation, Compatible Numbers  
**Standard:** Performs computations mentally using strategies such as multiples of ten, powers of ten, compensation, breaking apart numbers, or compatible numbers.

## Strand: Geometry & Spatial Sense; Measurement

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- 19** **Topic:** Edge, Face, Vertex, n-gon  
**Standard:** Classifies plane and solid geometric figures based on their properties/ characteristics (number or length of sides, angle measures, edges, faces, or vertices). This includes quadrilaterals (trapezoid, parallelogram, square, rectangle, rhombus); triangles (acute, obtuse, right, equilateral, isosceles, scalene); solids (prism, pyramid, cone, cylinder, sphere); and n-gons (pentagon, hexagon, octagon).
- 20** **Topic:** Symbol, Point, Line, Line Segment, Ray, Polygon, Vertex, Angle, Diagonal  
**Standard:** Identifies physical and symbolic representations using appropriate labeling of geometric figures, such as points, lines, line segments, rays, polygons, vertices, angles, and diagonals.
- 21** **Topic:** Similarity, Congruence  
**Standard:** Uses properties to determine similarity and congruency of geometric figures.
- 22** **Topic:** Angle, Triangle  
**Standard:** Solves problems by using the property that the sum of the angles in a triangle is 180 degrees.
- 23** **Topic:** Geometric Properties  
**Standard:** Uses geometric figures, properties, and relations to solve problems.
- 24** **Topic:** Ordered Pair, Coordinate Plane  
**Standard:** Identifies and graphs an ordered pair of integers on a four-quadrant coordinate plane.
- 25** **Topic:** Reflection, Rotation, Translation  
**Standard:** Analyzes effects of basic transformations on geometric shapes.
- 26** **Topic:** Area, Volume, Length  
**Standard:** Determines how changing a linear measure on a geometric figure affects area and volume.
- 27** **Topic:** Degree, Protractor  
**Standard:** Measures and draws angles using a protractor and classifies angles by their measures (e.g., acute, obtuse, right, straight, complementary, supplementary).

- 28** **Topic:** Length, Perimeter, Circumference, Area, Volume/Capacity, Weight/Mass, Time, Temperature, Angle Measure  
**Standard:** Selects and uses appropriate customary and metric units of measure for length (including perimeter and circumference), area, volume, capacity, weight /mass, time, temperature, and angle measure.
- 29** **Topic:** Length, Capacity, Weight/Mass, Time, Money  
**Standard:** Converts from one metric unit to another metric unit and from one customary unit to another customary unit (length, capacity, weight/ mass, time, and money).

## Strand: Number Sense & Numeration; Fractions & Decimals

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- 30** **Topic:** Equivalent Representations  
**Standard:** Uses fractions, decimals, and percents interchangeably, and recognizes equivalent representations.
- 31** **Topic:** Exponent, Power, Equivalent Representations  
**Standard:** Expresses standard numerals in scientific notation and expresses scientific notation as a standard numeral.
- 32** **Topic:** Exponent, Power, Base, Square Root, Equivalent Representations  
**Standard:** Evaluates powers using exponents and bases correctly, and finds square roots.
- 33** **Topic:** Ordering  
**Standard:** Compares and orders real numbers (whole numbers, integers, fractions, decimals, and percents).
- 34** **Topic:** Associative, Commutative, Distributive, Identity, Inverse, Properties of Zero and One  
**Standard:** Recognizes, describes, and applies all properties of the real numbers system (associative, commutative, inverses, identities, properties of zero and one, and the distributive property of multiplication over addition) in situations such as evaluating algebraic expressions and solving equations.
- 35** **Topic:** Factor, Multiple, Prime, Composite  
**Standard:** Identifies factors multiples, primes and composites.
- 36** **Topic:** Prime Factor  
**Standard:** Writes a given positive integer as the product of a unique set of prime factors (prime factorization).
- 37** **Topic:** Factor, Prime, Multiple, GCF, LCM  
**Standard:** Identifies and applies divisibility, factors, prime factors, greatest common factor, and least common multiple.
- 38** **Topic:** Subsets of Real Numbers: Natural, Whole, Integer, Rational, Irrational  
**Standard:** Identifies subsets of the real numbers and determines all subsets of which a given number is an element (e.g., 9 is a whole number, a natural number, and an integer).

## Strand: Statistics & Probability

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- 39** **Topic:** Prediction, Outcome, Event  
**Standard:** Identifies possible outcomes of simple and compound experiments, and predicts or describes the probability of a given event, expressed as a rational number from 0 through 1.

## Strand: Problem Solving

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- 40** **Topic:** Problem Solving  
**Standard:** Selects and uses appropriate problem-solving strategies to solve single- and multi-step problems.
- 41** **Topic:** Constant Rate  
**Standard:** Solves practical problems using ratio and proportion, including constant rate.
- 42** **Topic:** Commission, Discount, Sales Tax, Sales Price  
**Standard:** Solves practical problems using percents (e.g., sales tax, sale price and commission, and discounts).

## Strand: Statistics & Probability

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- 43**     **Topic:** Data Collection, Data Organization, Data Display, Scale  
**Standard:** Collects and organizes data, determines appropriate method and scale to display data, and constructs frequency distributions; bar, line, and circle graphs; tables and charts; line plots, stem-and-leaf plots, box-and-whisker plots, and scatter plots.
- 44**     **Topic:** Mean, Median, Mode, Range  
**Standard:** Uses mean, median, mode, and range to describe tendencies of a data set and make predictions.
- 45**     **Topic:** Data Interpretation, Data Display, Prediction, Conclusion  
**Standard:** Reads, interprets, compares, and analyzes data in frequency distributions, diagrams, charts, tables, and graphs (bar, line, circle, stacked bar, double line, and multiple bar), and makes predictions or conclusions based on this data.