| **DOMAIN** | **Standard Statements Level A** | **Standard Statements Level B** | **Standard Statements Level C** | **Standard Statements Level D** |
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| Number and Operations: Base Ten and The Number System (Levels C & D) | **Understand place value.**Only to two-digit positive whole numbers | **Understand place value.**Three-digit whole numbersCounts by hundredsSkip count by 5, 10, 100’s | **Generalize place value understanding for multi-digit whole numbers.**Multi-digit whole numbersRecognize ten times a numberExpanded form with numbers and exponents |  |
| **Use place value understanding and the properties of operations to add and subtract.**Use properties of numbers and concrete models and drawings | **Use place value understanding and properties of operations to add and subtract.**Up to four two-digit numbersMentally add 10 or 100 to numbers | **Use place value understanding and properties of operations to perform multi-digit arithmetic.**Multiply a 4-digit whole number by a 1-digit whole number, using properties of operationUse arrays, equations, area modelsDivide 4-digit dividends and 1-digit divisors, using various strategies |  |
|  | **Use place value understanding and properties of operations to perform multi-digit arithmetic.**Fluency of addition and subtraction within 1000Multiply one digit numbers by multiples of 10Round to nearest 10 or 100 | **Understand the place value system.**Digits represent 10 times or 1/10 of place next doorExplain patterns of 0 in multiplying and dividing powers of 10Compare and expand decimals to thousandths |  |
|  |  | **Perform operations with multi-digit whole numbers and with decimals to hundredths.**Use decimals to hundredths, using concrete models or drawings | **Apply and extend previous understandings of numbers to the system of rational numbers.**Includes positive and negative numbersUse absolute value  |
|  |  | **Compute fluently with multi-digit numbers and find common factors and multiples.**Find greatest common factor of 2 whole numbers less than 100Find least common multiple of 2 whole numbers less than 13Use distributive property | **Know that there are numbers that are not rational, and approximate them by rational numbers.**Estimate √2 |
| Number and Operations: Fractions and Number Systems (Level D)Number and Operations: Fractions and Number Systems (Level D) - *Continued from p.1* |  | **Develop understanding of fractions as numbers.**Limited to fractions with denominators 2, 3, 4, 6, 8Simple equivalent fractionsFraction on a number lineWhole numbers as fractionsComparing fractions with like denominators | **Extend understanding of fraction equivalence and ordering.**Equivalent fractions – explainCompare different denominators and numerators, by comparing to benchmark ½ | **Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.**Properties! |
|  |  | **Build fractions from unit fractions by applying and extending previous understanding of operations on whole numbers.**Decompose into sum of fractionAdd and subtract mixed numbers with like denominatorsMultiples of unit fractionsMultiply fractions by whole numbers |  |
|  |  | **Understand decimal notation for fractions, and compare decimal fractions.****Use equivalent fractions as strategy to add and subtract fractions.**Decimal notations for fractions – 10ths and 100thsUnlike denominators (and mixed numbers) |  |
|  |  | **Apply and extend previous understanding of multiplication and division to multiply and divide fractions.**Multiply fraction by a fractionMultiplication as scalingDivide unit fractions by whole numbers |  |
|  |  | **Apply and extend previous understanding of multiplication and division to divide fractions by fractions.**Visual models |  |
| Ratios and Proportional Relationships |  |  | **Understand ratio concepts and use ratio reasoning to solve problems.**Unit rate | **Understand ratio concepts and use ratio reasoning to solve problems.**Tables of equivalent ratios |
|  |  |  | **Analyze proportional relationships and use them to solve real-world and mathematical problems.**Graphing proportions |
| Operations and Algebraic ThinkingOperations and Algebraic Thinking -*Continued from p.2* | **Represent and solve problems involving addition and subtraction.**Word problems, and symbol for unknown | **Represent and solve problems involving addition and subtraction.**Within 100One- and two-step word problems | **Use the four operations with whole numbers to solve problems.**Use variable representation in word problem equations |  |
| **Understand and apply properties of operations and the relationship between addition and subtraction.**Commutative property; subtraction as an unknown-addend problem  | **Add and subtract within 20.**Mental strategies | **Gain Familiarity with factors and multiples.**Determine primes & composites from 1 - 100 |  |
| **Add and subtract with 20.**Fluently – use mental math by decomposing, relationship between addition and subtraction | **Represent and solve problems involving multiplication and division.**Within 100Understand an arrayFind unknown in multiplication and division equations |  |  |
| **Work with addition and subtraction.**Understand sign, vary place of unknown number | **Understand properties of multiplication and the relationship between multiplication and division.**Commutative, associative, distributive propertiesDivision as unknown-factor problem | **Write and interpret numerical expressions.**Interpret grouping brackets w/o calculating expression |  |
|  | **Multiply and divide within 100.**Master multiplication of two one-digit numbers |  |  |
|  | **Solve problems using the four operations and identify and explain patterns in arithmetic.**Two-step word problems | **Generate and analyze patterns.**Verbalize patterns |  |
| Expressions and Equations |  |  | **Apply and extend previous understandings of arithmetic to algebraic expressions.**Whole-number exponentsSolve one-step equations | **Use properties of operations to generate equivalent expressions.** |
|  |  | **Reason about and solve one-variable equations and inequalities.**Inequalities have infinite solutions. Graph on number line | **Solve real-life and mathematical problems using numerical and algebraic expressions and equations.**Inequalities |
|  |  | **Represent and analyze quantitative relationships between dependent and independent variables.** Graph relationship between dependent and independent variable  | **Work with radicals and integer exponents.**Scientific notation |
|  |  |  | **Understand the connections between proportional relationships, lines, and linear equations.** |
|  |  |  | **Analyze and solve linear equations and pairs of simultaneous linear equations.** |
| Functions |  |  |  | **Define, evaluate, and compare functions.** |
|  |  |  | **Use functions to model relationships between quantities.**y = mx + b format |
| Geometry  | **Analyze, compare, create, compose shapes.**2- and 3-dimensional; informal language to describe | **Reason with shapes and their attributes.**Identify triangles, quadrilaterals, pentagons, hexagons, and cubesPartition shapes into halves, thirds, quarters (fractional parts)Vocabulary of shapes and attributes | **Classify two-dimensional figures into categories based on their properties.** | **Draw, construct, and describe geometrical figures and describe the relationships between them.**Scale drawings |
| **Reason with shapes and their attributes.**Compose 2-D shapes (including trapezoids, half-circles) and 3-D shapes (cubes, cones, cylinders) to create composite shape | **Solve real-world and mathematical problems involving area, surface area, and volume.**Use area formulas to find area of more complex shapes.Draw polygons on coordinate graph and find lengths of horizontal or vertical sidesUse nets to find surface area | **Solve real-life and mathematical problems involving angle, measure, area, surface area, and volume.** |
|  |  | **Draw and identify lines and angles, and classify shapes by properties of their lines and angles.** | **Understand congruence and similarity using physical models, transparencies, or geometry software.** |
|  |  | **Graph points on the coordinate plane to solve real-world and mathematical problems.**Introduce coordinate system | **Understand and apply the Pythagorean Theorem.** |
| Measurement(could also be considered Geometry)  | **Measure lengths indirectly and by iterating length units.**Whole number lengths; many small make one large | **Measure and estimate lengths in standard units.**Inches, feet, centimeters, meters | **Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.**Given area, find lengthGiven area, find possible perimeters  |  |
|  | **Relate addition and subtraction to length.**Whole numbers on number line within 100 | **Convert like measurement units within given measurement system.**Solve real-world problems |  |
|  | **Solve problems involving measurement and estimation of intervals of time, liquid, volumes, and masses of objects.**Solve time word problems to nearest minute, gram, kilogram, liter One-step word problems with masses or volumes in same unit | **Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.**Unit cube and concept of volume as area of the base times the height |  |
|  | **Geometric measurement: understand concepts of area and relate to area of multiplication and addition.**Area by counting unit squares, addition, and multiplicationArea model to show distributive propertyRecognize area as additive |  |  |
|  | **Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.**Real world perimeter problemsFind unknown side lengthUnderstand differences between perimeter and area |  |  |
| Data and Statistics and Probability (Level D) | **Represent and interpret data.**Up to 3 categories | **Represent and interpret data.**Picture graph, bar graphHalves and fourths of inch on ruler  | **Represent and interpret data.**Line plot; simple fractional increments | **Summarize and describe distributions.** |
|  |  | **Develop understanding of statistical variability.**Measure of central tendency and variability from that center | **Use random sampling to draw inferences about a population.** |
|  |  | **Summarize and describe distribution.**Dot plots, histograms and box plots | **Draw informal comparative inferences about two populations.** |
|  |  |  | **Investigate chance processes and develop, use, and evaluate probability models.** |
|  |  |  | **Investigate patterns of association in bivariate data.** |