

**Arizona State Standards
correlated to
Merit Software Math Programs**

The state Board of Education adopted the Arizona Academic Standards in 1996 to define what Arizona's students need to know and be able to do by the end of twelfth grade. Developed by committees comprised of educators, parents, students, and business and community leaders, these standards were written in grade-level clusters with benchmarks at grades 3, 5, 8, and high school.

Merit's Math programs address the following Arizona State Standards:

Grade 3 pg. 1-11
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Grade 3

Strand	Concept	Performance Outcome	Merit Software
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 1. Read whole numbers in contextual situations (through six-digit numbers).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 2. Identify six-digit whole numbers in or out of order.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 3. Write whole numbers through six-digits in or out of order.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 4. State whole numbers, through six-digits, with correct place value, by using models, illustrations, symbols, or expanded notation (e.g., $53,941 = 50,000 + 3,000 + 900 + 40 + 1$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 5. Construct models to represent place value concepts for the one's, ten's, and hundred's places.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 6. Apply expanded notation to model place value through 9,999. (e.g., $5,378 = 5,000 + 300 + 70 + 8$)	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 7. Sort whole numbers into sets containing only odd numbers or only even numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 8. Compare two whole numbers, through six-digits.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 9. Order three or more whole numbers through six-digit numbers (least to greatest, or greatest to least).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 10. Make models that represent proper fractions (halves, thirds, fourths, eighths, and tenths).	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 11. Identify symbols, words, or models that represent proper fractions (halves, thirds, fourths, eighths, and tenths).	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 12. Use proper fractions in contextual situations.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 13. Compare two proper fractions with like denominators.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 21. Determine multiples of a given whole number with products through 24 (skip counting).	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 2. Add two three-digit whole numbers.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 3. Subtract two three-digit whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 4. Add a column of numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 5. Select the grade-level appropriate operation to solve word problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 6. Solve word problems using grade-level appropriate operations and numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 7. Demonstrate the process of multiplication as repeatedly adding the same number, counting by multiples, combining equal sets, and making arrays.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 15. Use grade-level appropriate mathematical terminology.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 1. Solve grade-level appropriate problems using estimation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 2. Estimate length and weight using U.S. customary units.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 3. Record estimated and actual linear measurements for real life objects (e.g., length of fingernail; height of desk).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 4. Compare estimations of appropriate measures to the actual measures.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 5. Evaluate the reasonableness of estimated measures.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 1. Formulate questions to collect data in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 2. Construct a horizontal bar, vertical bar, pictograph, or tally chart with appropriate labels and title from organized data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 3. Interpret data found in line plots, pictographs, and single-bar graphs (horizontal and vertical).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 4. Answer questions based on data found in line plots, pictographs, and single-bar graphs (horizontal and vertical).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 5. Formulate questions based on graphs, charts, and tables to solve problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 6. Solve problems using graphs, charts and tables.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 1. Name the possible outcomes for a probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 2. Make predictions about the probability of events being more likely, less likely, equally likely or unlikely.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 3. Predict the outcome of a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 4. Record the data from performing a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 6. Compare the results of two repetitions of the same grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 3: Discrete Mathematics – Systematic Listing and Counting Understand and demonstrate the systematic listing and counting of possible outcomes.	PO 1. Make a diagram to represent the number of combinations available when 1 item is selected from each of 3 sets of 2 items (e.g., 2 different shirts, 2 different hats, 2 different belts).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 4: Vertex-Edge Graphs Understand and apply vertex-edge graphs.	PO 1. Color maps with the least number of colors so that no common edges share the same color (increased complexity throughout grade levels).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 1. Communicate a grade-level appropriate iterative pattern, using symbols or numbers.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 2. Extend a grade-level appropriate repetitive pattern. (e.g., 5, 10, 15, 20,...rule: add five or count by five's	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 3. Solve grade-level appropriate pattern problems.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 2: Functions and Relationships Describe and model functions and their relationships.	PO 1. Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model, and frames and arrows).	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 1. Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model, and frames and arrows).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 2. Solve equations with one variable using missing addends to sums of 18 (e.g., $\quad + 9 = 18$, $9 + \quad = 18$); using minuend through 18 (e.g., $18 - \quad = 9$, $18 - 9 = \quad$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 4: Analysis of Change Analyze change in a variable over time and in various contexts.	PO 1. Identify the change in a variable over time (e.g., an object gets taller, colder, heavier).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 4: Analysis of Change Analyze change in a variable over time and in various contexts.	PO 2. Make simple predictions based on a variable (e.g., increases in allowance as you get older).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 2. Name concrete objects and pictures of 3-dimensional solids (cones, spheres, and cubes).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 3. Describe relationships between 2-dimensional and 3-dimensional objects. (squares/cubes, circles/spheres, triangles/cones)	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 1. Select the appropriate measure of accuracy: <ul style="list-style-type: none"> • length – centimeters, meters; kilometers • capacity/volume – liters • mass/weight – grams. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure</p> <p>Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 2. Tell time with one-minute precision (analog).</p>	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure</p> <p>Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 4. Measure a given object using the appropriate unit of measure:</p> <ul style="list-style-type: none"> • length – centimeters, millimeters, meters, kilometers a.capacity/volume – liters mass/weight – grams. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure</p> <p>Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 5. Record temperatures to the nearest degree in degrees Fahrenheit and degrees Celsius as shown on a thermometer.</p>	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure</p> <p>Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 7. Determine relationships for:</p> <ul style="list-style-type: none"> • volume – cups and gallons, • weight – ounces and pounds, and • money – extend to amounts greater than one dollar. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure</p> <p>Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 8. Compare the length of two objects using U.S. customary or metric units.</p>	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>

Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	PO 9. Determine the perimeter using a rectangular array.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	PO 10. Represent area using a rectangular array.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Structure and Logic	<p>Concept 1: Algorithms and Algorithmic Thinking</p> <p>Use reasoning to solve mathematical problems in contextual situations.</p>	PO 1. Discriminate necessary information from unnecessary information in a given grade-level appropriate word problem.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Structure and Logic	<p>Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof</p> <p>Evaluate situations, select problem-solving strategies, draw logical conclusions, develop and describe solutions and recognize their applications.</p>	PO 1. Draw conclusions based on existing information (e.g., All students in Ms. Dean's 1st grade class are less than 7 years old. Rafael is in Ms. Dean's class. Conclusion: Rafael is less than 7 years old.).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Grade 4

Strand	Concept	Performance Outcome	Merit Software
Number Sense and Operations	<p>Concept 1: Number Sense</p> <p>Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.</p>	PO 1. Read whole numbers in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 2. Identify whole numbers in or out of order.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 3. Write whole numbers in or out of order.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 4. State place values for whole numbers (e.g., In the number 203,495 what is the value of the 2?).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 5. Construct models to represent place value concepts for the one's, ten's, hundred's, and thousand's places.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 6. Apply expanded notation to model place value. (e.g., $203,495 = 200,000 + 3,000 + 400 + 90 + 5$)	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 7. Compare two whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 8. Order three or more whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 9. Make models that represent mixed numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 10. Identify symbols, words, or models that represent mixed numbers.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 11. Use mixed numbers in contextual situations.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 12. Compare two unit fractions (e.g., $\frac{1}{2}$ to $\frac{1}{5}$) or proper or mixed numbers with like denominators.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 13. Order three or more unit fractions or proper or improper fractions with like denominators.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 19. Determine multiples of a given whole number with products through 144.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 1. Add whole numbers.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 2. Subtract whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 3. Select the grade-level appropriate operation to solve word problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 4. Solve word problems using grade-level appropriate operations and numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 5. Multiply multi-digit numbers by two-digit numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 11. Use grade-level appropriate mathematical terminology.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 12. Add or subtract fractions with like denominators, no regrouping.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 1. Solve grade-level appropriate problems using estimation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 2. Use estimation to verify the reasonableness of a calculation (e.g., Is $3284 \times 343 = 1200$ reasonable?).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 3. Estimate length and weight using both U.S. customary and metric units.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 4. Estimate and measure for distance.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 1. Formulate questions to collect data in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 2. Construct a single-bar graph, line graph or two-set Venn diagram with appropriate labels and title from organized data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 3. Interpret graphical representations and data displays including single-bar graphs, circle graphs, two-set Venn diagrams, and line graphs that display continuous data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 4. Answer questions based on graphical representations and data displays including single-bar graphs, circle graphs, two-set Venn diagrams, and line graphs that display continuous data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 5. Identify the mode(s) of given data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 6. Formulate predictions from a given set of data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 1. Name the possible outcomes for a probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 2. Describe the probability of events as being more likely, less likely, equally likely, unlikely, certain, impossible, fair or unfair.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 3. Predict the outcome of a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 4. Record the data from performing a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 6. Make predictions from the results of student-generated experiments using objects (e.g., coins, spinners, number cubes).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 7. Compare the results of two repetitions of the same grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 3: Discrete Mathematics – Systematic Listing and Counting Understand and demonstrate the systematic listing and counting of possible outcomes.	PO 1. Find all possible combinations when 1 item is selected from each of two sets containing up to three objects (e.g., How many outfits can be made with 3 pants and 2 tee shirts?).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 4: Vertex-Edge Graphs Understand and apply vertex-edge graphs.	PO 1. Color maps with the least number of colors so that no common edges share the same color (increased complexity throughout grade levels).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 1. Communicate a grade-level appropriate iterative pattern, using symbols or numbers.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 2. Extend a grade-level appropriate iterative pattern.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 3. Create grade-level appropriate iterative patterns.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 2: Functions and Relationships Describe and model functions and their relationships.	PO 1. Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model).	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 1. Evaluate expressions involving the four basic operations by substituting given whole numbers for the variable.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 2. Use variables in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 3. Solve one-step equations with one variable represented by a letter or symbol using multiplication of whole numbers (e.g., $12 = n \times 4$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 4: Analysis of Change Analyze change in a variable over time and in various contexts.	PO 1. Evaluate expressions involving the four basic operations by substituting given whole numbers for the variable.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 4: Analysis of Change Analyze change in a variable over time and in various contexts.	PO 2. Make simple predictions based on a variable (e.g., increase homework time as you progress through the grades).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 2. Identify models or illustrations of prisms, pyramids, cones, cylinders, and spheres.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 3. Draw points, lines, line segments (open or closed endpoints), rays, or angles.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 4. Classify angles (e.g., right, acute, obtuse, straight).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 1. Identify the appropriate measure of accuracy for the area of an object (e.g., sq. ft. or sq. miles).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 2. Compute elapsed time using a clock (e.g., hours and minutes since or until...) or a calendar (e.g., days, weeks, years since or until...).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 3. Select an appropriate tool to use in a particular measurement situation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 4. Approximate measurements to the appropriate degree of accuracy.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 5. Compare units of measure to determine more or less relationships including:</p> <ul style="list-style-type: none"> length - yards and miles; meters and kilometers and weight - pounds and tons; grams and kilograms. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 6. State equivalent relationships (e.g., 3 teaspoons = 1 tablespoon, 16 cups = 1 gallon, 2000 pounds = 1 ton).</p>	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 7. Compare the weight of two objects using both U.S. customary and metric units.</p>	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 9. Determine the area of squares and rectangles.</p>	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Structure and Logic	<p>Concept 1: Algorithms and Algorithmic Thinking</p> <p>Use reasoning to solve mathematical problems in contextual situations.</p>	<p>PO 1. Discriminate necessary information from unnecessary information in a given grade-level appropriate word problem.</p>	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Structure and Logic	<p>Concept 1: Algorithms and Algorithmic Thinking</p> <p>Use reasoning to solve mathematical problems in contextual situations.</p>	<p>PO 2. Develop an algorithm to calculate perimeter of simple polygons.</p>	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Structure and Logic	<p>Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof</p> <p>Evaluate situations, select problem-solving strategies, draw logical conclusions, develop and describe solutions and recognize their applications.</p>	PO 1. Draw a conclusion from a Venn diagram.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
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Grade 5

Strand	Concept	Performance Outcome	Merit Software
Number Sense and Operations	<p>Concept 1: Number Sense</p> <p>Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.</p>	PO 1. Make models that represent improper fractions.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	<p>Concept 1: Number Sense</p> <p>Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.</p>	PO 2. Identify symbols, words, or models that represent improper fractions.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	<p>Concept 1: Number Sense</p> <p>Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.</p>	PO 3. Use improper fractions in contextual situations.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	<p>Concept 1: Number Sense</p> <p>Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.</p>	PO 4. Compare two proper fractions or improper fractions with like denominators.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 5. Order three or more unit fractions, proper or improper fractions with like denominators, or mixed numbers with like denominators.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 6. Compare two whole numbers, fractions, and decimals. (e.g., $\frac{1}{2}$ to 0.6)	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 7. Order whole numbers, fractions, and decimals.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 8. Determine the equivalency between and among fractions, decimals, and percents in contextual situations.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 9. Identify all whole number factors and pairs of factors for a number.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 10. Recognize that 1 is neither a prime nor a composite number.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 11. Sort whole numbers (through 50) into sets containing only prime numbers or only composite numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 1. Select the grade-level appropriate operation to solve word problems.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 2. Solve word problems using grade-level appropriate operations and numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 3. Multiply whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 4. Divide with whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 5. Demonstrate the distributive property of multiplication over addition.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 6. Demonstrate the addition and multiplication properties of equality.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 7. Apply grade-level appropriate properties to assist in computation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 9. Use grade-level appropriate mathematical terminology.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 10. Simplify fractions to lowest terms.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 1. Solve grade-level appropriate problems using estimation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 2. Use estimation to verify the reasonableness of a calculation (e.g., Is 4.1×2.7 about 12?).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 3. Round to estimate quantities.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 4. Estimate and measure for area and perimeter.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 5. Compare estimated measurements between U.S. customary and metric systems. (e.g., A yard is about a meter.)	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 1. Formulate questions to collect data in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 2. Construct a single-bar graph, line graph or two –set Venn diagram with appropriate labels and title from organized data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 3. Interpret graphical representations and data displays including bar graphs (including double-bar), circle graphs, frequency tables, three-set Venn diagrams, and line graphs that display continuous data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 4. Answer questions based on graphical representations and data displays including single-bar graphs, circle graphs, two-set Venn diagrams, and line graphs that display continuous data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 5. Identify the mode(s) and mean (average) of given data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 6. Formulate reasonable predictions from a given set of data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 1. Name the possible outcomes for a probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 2. Describe the probability of events as being: <ul style="list-style-type: none"> • certain (represented by “1”), • impossible, (represented by “0”), or neither certain nor impossible (represented by a fraction less than 1). 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 3. Predict the outcome of a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 4. Record the data from performing a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 6. Make predictions from the results of student-generated experiments using objects (e.g., coins, spinners, number cubes).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 7. Compare the results of two repetitions of the same grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 3: Discrete Mathematics – Systematic Listing and Counting Understand and demonstrate the systematic listing and counting of possible outcomes.	PO 1. Find all possible combinations when 1 item is selected from each of 2 sets of different items, using a systematic approach (e.g., shirts: tee shirt, tank top, sweatshirt; pants: shorts, jeans).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Probability, and Discrete Mathematics	Concept 4: Vertex-Edge Graphs Understand and apply vertex-edge graphs.	PO 1. Color maps with the least number of colors so that no common edges share the same color (increased complexity throughout grade levels).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 1. Communicate a grade-level appropriate iterative pattern, using symbols or numbers.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 2. Extend a grade-level appropriate iterative pattern.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 3. Solve grade-level appropriate iterative pattern problems.	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 2: Functions and Relationships Describe and model functions and their relationships.	PO 1. Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model).	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 1. Evaluate expressions involving the four basic operations by substituting given whole numbers for the variable.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 2. Use variables in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 3. Solve one-step equations with one variable represented by a letter or symbol (e.g., $15 = 45 \div n$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Patterns, Algebra, and Functions	Concept 4: Analysis of Change Analyze change in a variable over time and in various contexts.	PO 1. Describe patterns of change: <ul style="list-style-type: none"> constant rate (speed of movement of the hands on a clock), and increasing or decreasing rate (rate of plant growth). 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 1. Recognize regular polygons.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 4. Identify the properties of two- and 3-dimensional geometric figures using appropriate terminology and vocabulary	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 6. Recognize that all pairs of vertical angles are congruent.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 3. Determine relationships including volume (e.g., pints and quarts, milliliters and liters).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 4. Convert measurement units to equivalent units within a given system (U.S. customary and metric) (e.g., 12 inches = 1 foot; 10 decimeters = 1 meter).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	PO 5. Solve problems involving the perimeter of convex polygons.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	PO 6. Determine the area of figures composed of two or more rectangles on a grid.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	PO 7. Solve problems involving the area of simple polygons.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	PO 8. Describe the change in perimeter or area when one attribute (length, width) of a rectangle is altered.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Structure and Logic	<p>Concept 1: Algorithms and Algorithmic Thinking</p> <p>Use reasoning to solve mathematical problems in contextual situations.</p>	PO 2. Design simple algorithms using whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Structure and Logic	<p>Concept 1: Algorithms and Algorithmic Thinking</p> <p>Use reasoning to solve mathematical problems in contextual situations.</p>	PO 3. Develop an algorithm to calculate perimeter of simple polygons.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Grades 6-8

Strand	Concept	Performance Outcome	Merit Software
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 1. Express fractions as ratios, comparing two whole numbers (e.g., $\frac{3}{4}$ is equivalent to 3:4 and 3 to 4).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 4. Determine the equivalency between and among fractions, decimals, and percents in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 5. Identify the greatest common factor for two whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 6. Determine the least common multiple for two whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 1: Number Sense Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.	PO 7. Order whole numbers, fractions, and decimals.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 1. Select the grade-level appropriate operation to solve word problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 2. Solve word problems using grade-level appropriate operations and numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 3. Apply grade-level appropriate properties to assist in computation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 4. Apply the symbols for “...” or “—” to represent repeating decimals and “.” to represent ratios, superscripts as exponents.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 5. Use grade-level appropriate mathematical terminology.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 6. Simplify fractions to lowest terms.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 7. Add or subtract proper fractions and mixed numbers with unlike denominators with regrouping.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 8. Demonstrate the process of multiplication of proper fractions using models.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 2: Numerical Operations Understand and apply numerical operations and their relationship to one another.	PO 14. Solve problems involving fractions or decimals (including money) in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 1. Solve grade-level appropriate problems using estimation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 2. Use estimation to verify the reasonableness of a calculation (e.g., Is $5/9 \times 3/7$ more than 1?).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 3. Round to estimate quantities in contextual situations (e.g., round up or round down).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 4. Estimate and measure for the area and perimeter of polygons using a grid.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Number Sense and Operations	Concept 3: Estimation Use estimation strategies reasonably and fluently.	PO 5. Verify the reasonableness of estimates made from calculator results within a contextual situation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 1. Formulate questions to collect data in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 2. Construct a single-bar graph, line graph or two –set Venn diagram with appropriate labels and title from organized data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 3. Interpret simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 4. Answer questions based on simple displays of data including double bar graphs, tally charts, frequency tables, circle graphs, and line graphs.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 5. Find the mean, median (odd number of data points), mode, range, and extreme values of a given numerical data set.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 1: Data Analysis (Statistics) Understand and apply data collection, organization and representation to analyze and sort data.	PO 6. Identify a trend (variable increasing, decreasing, remaining constant) from displayed data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 1. Name the possible outcomes for a probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO2. Express probabilities of a single event as a decimal.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 3. Predict the outcome of a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 4. Record the data from performing a grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 6. Make predictions from the results of student-generated experiments using objects (e.g., coins, spinners, number cubes).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 2: Probability Understand and apply the basic concepts of probability.	PO 7. Compare the results of two repetitions of the same grade-level appropriate probability experiment.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 3: Discrete Mathematics – Systematic Listing and Counting Understand and demonstrate the systematic listing and counting of possible outcomes.	PO 1. Determine all possible outcomes involving a combination of 3 sets of 3 items, using a systematic approach (e.g., 3 different shirts, 3 different pairs of pants, and 3 different belts).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Data Analysis, Probability, and Discrete Mathematics	Concept 4: Vertex-Edge Graphs Understand and apply vertex-edge graphs.	PO 1. Find the shortest route on a map from one site to another (vertex-edge graph).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 1. Communicate a grade-level appropriate iterative pattern, using symbols or numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 2. Extend a grade-level appropriate iterative pattern.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Patterns, Algebra, and Functions	Concept 1: Patterns Identify patterns and apply pattern recognition to reason mathematically.	PO 3. Solve grade-level appropriate iterative pattern problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Patterns, Algebra, and Functions	Concept 2: Functions and Relationships Describe and model functions and their relationships.	PO 1. Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model).	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 1. Evaluate expressions involving the four basic operations by substituting given fractions for the variable (e.g., $n+3$, when $n= \frac{1}{2}$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 2. Use variables in contextual situations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 3. Translate a written phrase to an algebraic expression (e.g., The quotient of m and 5 is $\frac{m}{5}$ or $m \div 5$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Patterns, Algebra, and Functions	Concept 3: Algebraic Representations Represent and analyze mathematical situations and structures using algebraic representations.	PO 4. Translate a phrase written in context into an algebraic expression (e.g., Write an expression to describe the situation: John has x pieces of candy and buys three more. $x + 3$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Patterns, Algebra, and Functions	Concept 4: Analysis of Change Analyze change in a variable over time and in various contexts.	PO 1. Identify values on a given line graph or scatter plot (e.g., Given a line showing wages earned per hour, what is the wage at five hours?).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 6. Draw triangles with appropriate labels.	Basic Algebra Shape-Up Set 1 & 2
Geometry and Measurement	Concept 1: Geometric Properties Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.	PO 7. Identify supplementary or complementary angles.	Basic Algebra Shape-Up Set 1 & 2
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 1. Determine the appropriate measure of accuracy within a system for a given contextual situation (e.g., Would you measure the length of your bedroom wall using inches or feet?).	Basic Algebra Shape-Up Set 1 & 2
Geometry and Measurement	Concept 4: Measurement - Units of Measure Geometric Objects Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.	PO 2. Determine the appropriate tool needed to measure to the needed accuracy.	Basic Algebra Shape-Up Set 1 & 2

Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 5. Convert within a single measurement system (U.S. customary or metric). (e.g., How many ounces are equivalent to 2 pounds?)</p>	Basic Algebra Shape-Up Set 1 & 2
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 6. Determine the area of figures composed of two or more rectangles on a grid.</p>	Basic Algebra Shape-Up Set 1 & 2
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 10. Identify parallelograms having the same perimeter or area.</p>	Basic Algebra Shape-Up Set 1 & 2
Geometry and Measurement	<p>Concept 4: Measurement - Units of Measure Geometric Objects</p> <p>Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.</p>	<p>PO 11. Determine the actual measure of objects using a scale drawing or map.</p>	Basic Algebra Shape-Up Set 1 & 2
Structure and Logic	<p>Concept 1: Algorithms and Algorithmic Thinking</p> <p>Use reasoning to solve mathematical problems in contextual situations.</p>	<p>PO 1. Discriminate necessary information from unnecessary information in a given grade-level appropriate word problem</p>	Basic Algebra Shape-Up Set 1 & 2
Structure and Logic	<p>Concept 1: Algorithms and Algorithmic Thinking</p> <p>Use reasoning to solve mathematical problems in contextual situations.</p>	<p>PO 2. Analyze algorithms for computing with decimals.</p>	Basic Algebra Shape-Up Set 1 & 2