

**Indiana Academic Standards
correlated to
Merit Software Math Programs**

The Math Standards (2000) describe a connected body of mathematical understandings and competencies and are a comprehensive foundation that all students should learn. They describe the mathematical understanding, knowledge and skills that students should acquire from Kindergarten through high school.

Merit's Math programs address the following Indiana Academic Standards:

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Grade 3

Subhead	Standard	Strand	Benchmark	Merit Software
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.1 Count, read, and write whole numbers up to 1,000.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.2 Identify and interpret place value in whole numbers up to 1,000.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up

Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.3 Use words, models, and expanded form to represent numbers up to 1,000.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.4 Identify any number up to 1,000 in various combinations of hundreds, tens, and ones.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.5 Compare whole numbers up to 1,000 and arrange them in numerical order.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.6 Round numbers less than 1,000 to the nearest ten and the nearest hundred.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.7 Identify odd and even numbers up to 1,000 and describe their characteristics.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up

Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.8 Show equivalent fractions using equal parts.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.9 Identify and use correct names for numerators and denominators.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.10 Given a pair of fractions, decide which is larger or smaller by using objects or pictures.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.11 Given a set of objects or a picture, name and write a decimal to represent tenths and hundredths.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.12 Given a decimal for tenths, show it as a fraction using a place-value model.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.13 Interpret data displayed in a circle graph and answer questions about the situation.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.14 Identify whether everyday events are certain, likely, unlikely, or impossible.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the relationships among numbers, quantities, and place value in whole numbers up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.	Number Sense	3.1.15 Record the possible outcomes for a simple probability experiment.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.1 Add and subtract whole numbers up to 1,000 with or without regrouping, using relevant properties of the number system.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.2 Represent the concept of multiplication as repeated addition.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.3 Represent the concept of division as repeated subtraction, equal sharing, and forming equal groups.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.4 Know and use the inverse relationship between multiplication and division facts, such as $6 \times 7 = 42$, $42 / 7 = 6$, $7 \times 6 = 42$, $42 / 6 = 7$.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.5 Show mastery of multiplication facts for 2, 5, and 10.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.6 Add and subtract simple fractions with the same denominator.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.7 Use estimation to decide whether answers are reasonable in addition and subtraction problems.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.	Computation	3.2.8 Use mental arithmetic to add or subtract with numbers less than 100.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 3: Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	Algebra and Functions	3.3.1 Represent relationships of quantities in the form of a numeric expression or equation.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	Algebra and Functions	3.3.2 Solve problems involving numeric equations.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	Algebra and Functions	3.3.3 Choose appropriate symbols for operations and relations to make a number sentence true.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	Algebra and Functions	3.3.4 Understand and use the commutative and associative properties of multiplication.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	Algebra and Functions	3.3.5 Create, describe, and extend number patterns using multiplication.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	Algebra and Functions	3.3.6 Solve simple problems involving a functional relationship between two quantities.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 3: Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.	Algebra and Functions	3.3.7 Plot and label whole numbers on a number line up to 10.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 4: Students describe and compare the attributes of plane and solid geometric shapes and use their understanding to show relationships and solve problems.	Geometry	3.4.2 Identify right angles in shapes and objects and decide whether other angles are greater or less than a right angle.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 4: Students describe and compare the attributes of plane and solid geometric shapes and use their understanding to show relationships and solve problems.	Geometry	3.4.6 Use the terms <i>point</i> , <i>line</i> , and <i>line segment</i> in describing two-dimensional shapes.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 4: Students describe and compare the attributes of plane and solid geometric shapes and use their understanding to show relationships and solve problems.	Geometry	3.4.7 Draw line segments and lines.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 4: Students describe and compare the attributes of plane and solid geometric shapes and use their understanding to show relationships and solve problems.	Geometry	3.4.10 Recognize geometric shapes and their properties in the environment and specify their locations.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.1 Measure line segments to the nearest half-inch.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.2 Add units of length that may require regrouping of inches to feet or centimeters to meters.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.3 Find the perimeter of a polygon.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.4 Estimate or find the area of shapes by covering them with squares.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.5 Estimate or find the volume of objects by counting the number of cubes that would fill them.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.8 Compare temperatures in Celsius and Fahrenheit.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.9 Tell time to the nearest minute and find how much time has elapsed.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.12 Carry out simple unit conversions within a measurement system (e.g., centimeters to meters, hours to minutes).	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.	Measurement	3.5.12 Carry out simple unit conversions within a measurement system (e.g., centimeters to meters, hours to minutes).	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.2 Decide when and how to break a problem into simpler parts.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.3 Apply strategies and results from simpler problems to solve more complex problems.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.4 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.5 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.6 Know and use strategies for estimating results of whole-number addition and subtraction.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.7 Make precise calculations and check the validity of the results in the context of the problem.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.8 Decide whether a solution is reasonable in the context of the original situation.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 6: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	3.6.9 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.	Word Problem Shape-Up Set 1, 2, 3
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Grade 4

Subhead	Standard	Strand	Benchmark	Merit Software
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.1 Read and write whole numbers up to 1,000,000.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.2 Identify and write whole numbers up to 1,000,000, given a place-value model.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.3 Round whole numbers up to 10,000 to the nearest ten, hundred, and thousand.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.4 Order and compare whole numbers using symbols for "less than" ($<$), "equal to" ($=$), and "greater than" ($>$).	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.5 Rename and rewrite whole numbers as fractions.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.6 Name and write mixed numbers, using objects or pictures.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.7 Name and write mixed numbers as improper fractions, using objects or pictures.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.8 Write tenths and hundredths in decimal and fraction notations. Know the fraction and decimal equivalents for halves and fourths (e.g., $\frac{1}{2} = 0.5 = 0.50$, $\frac{7}{4} = 1\frac{3}{4} = 1.75$).	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions.	Number Sense	4.1.9 Round two-place decimals to tenths or to the nearest whole number.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.1 Understand and use standard algorithms for addition and subtraction.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.2 Represent as multiplication any situation involving repeated addition.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.3 Represent as division any situation involving the sharing of objects or the number of groups of shared objects.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.4 Demonstrate mastery of the multiplication tables for numbers between 1 and 10 and of the corresponding division facts.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.5 Use a standard algorithm to multiply numbers up to 100 by numbers up to 10, using relevant properties of the number system.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.6 Use a standard algorithm to divide numbers up to 100 by numbers up to 10 without remainders, using relevant properties of the number system.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.7 Understand the special properties of 0 and 1 in multiplication and division.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.8 Add and subtract simple fractions with different denominators, using objects or pictures.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.9 Add and subtract decimals (to hundredths), using objects or pictures.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.10 Use a standard algorithm to add and subtract decimals (to hundredths).	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.11 Know and use strategies for estimating results of any whole-number computations.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among these operations. They extend their use and understanding of whole numbers to the addition and subtraction of simple fractions and decimals.	Computation	4.2.12 Use mental arithmetic to add or subtract numbers rounded to hundreds or thousands.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Algebra and Functions	4.3.1 Use letters, boxes, or other symbols to represent any number in simple expressions, equations, or inequalities (i.e., demonstrate an understanding of and the use of the concept of a variable).	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Algebra and Functions	4.3.2 Use and interpret formulas to answer questions about quantities and their relationships.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Algebra and Functions	4.3.3 Understand that multiplication and division are performed before addition and subtraction in expressions without parentheses.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Algebra and Functions	4.3.4 Understand that an equation such as $y = 3x + 5$ is a rule for finding a second number when a first number is given.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Algebra and Functions	4.3.5 Continue number patterns using multiplication and division.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Algebra and Functions	4.3.6 Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve problems.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Algebra and Functions	4.3.7 Relate problem situations to number sentences involving multiplication and division.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 3: Students use and interpret variables, mathematical symbols, and properties to write and simplify numerical expressions and sentences. They understand relationships among the operations of addition, subtraction, multiplication, and division.	Measurement	4.3.8 Plot and label whole numbers on a number line up to 100. Estimate positions on the number line.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.	Geometry	4.4.1 Identify, describe, and draw rays, right angles, acute angles, obtuse angles, and straight angles using appropriate mathematical tools and technology.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.	Geometry	4.4.2 Identify, describe, and draw parallel, perpendicular, and oblique lines using appropriate mathematical tools and technology.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 4: Students show an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.	Geometry	4.4.3 Identify, describe, and draw parallelograms, rhombuses, and trapezoids, using appropriate mathematical tools and technology.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.1 Measure length to the nearest quarter-inch, eighth-inch, and millimeter.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.2 Subtract units of length that may require renaming of feet to inches or meters to centimeters.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.3 Know and use formulas for finding the perimeters of rectangles and squares.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.4 Know and use formulas for finding the areas of rectangles and squares.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	3.5.9 Tell time to the nearest minute and find how much time has elapsed.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.5 Estimate and calculate the area of rectangular shapes using appropriate units, such as square centimeter (cm^2), square meter (m^2), square inch (in^2), or square yard (yd^2).	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.6 Understand that rectangles with the same area can have different perimeters and that rectangles with the same perimeter can have different areas.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.7 Find areas of shapes by dividing them into basic shapes such as rectangles.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 5: Students understand perimeter and area, as well as measuring volume, capacity, time, and money.	Measurement	4.5.8 Use volume and capacity as different ways of measuring the space inside a shape.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations.	Data Analysis and Probability	4.6.1 Represent data on a number line and in tables, including frequency tables.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations.	Data Analysis and Probability	4.6.2 Interpret data graphs to answer questions about a situation.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations.	Data Analysis and Probability	4.6.3 Summarize and display the results of probability experiments in a clear and organized way.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.2 Decide when and how to break a problem into simpler parts.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.3 Apply strategies and results from simpler problems to solve more complex problems.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, tools, and models to solve problems, justify arguments, and make conjectures.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.5 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.6 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.7 Know and use appropriate methods for estimating results of whole-number computations.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.8 Make precise calculations and check the validity of the results in the context of the problem.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.9 Decide whether a solution is reasonable in the context of the original situation.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	4.7.10 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.	Word Problem Shape-Up Set 1, 2, 3

Grade 5

Subhead	Standard	Strand	Benchmark	Merit Software
Math	Standard 1: Students compute with whole numbers, decimals, and fractions and understand the relationship among decimals, fractions, and percents. They understand the relative magnitudes of numbers. They understand prime and composite numbers.	Number Sense	5.1.1 Convert between numbers in words and numbers in figures, for numbers up to millions and decimals to thousandths.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compute with whole numbers, decimals, and fractions and understand the relationship among decimals, fractions, and percents. They understand the relative magnitudes of numbers. They understand prime and composite numbers.	Number Sense	5.1.2 Round whole numbers and decimals to any place value.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compute with whole numbers, decimals, and fractions and understand the relationship among decimals, fractions, and percents. They understand the relative magnitudes of numbers. They understand prime and composite numbers.	Number Sense	5.1.3 Arrange in numerical order and compare whole numbers or decimals to two decimal places by using the symbols for less than (<), equals (=), and greater than (>).	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compute with whole numbers, decimals, and fractions and understand the relationship among decimals, fractions, and percents. They understand the relative magnitudes of numbers. They understand prime and composite numbers.	Number Sense	5.1.4 Interpret percents as a part of a hundred. Find decimal and percent equivalents for common fractions and explain why they represent the same value.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 1: Students compute with whole numbers, decimals, and fractions and understand the relationship among decimals, fractions, and percents. They understand the relative magnitudes of numbers. They understand prime and composite numbers.	Number Sense	5.1.5 Explain different interpretations of fractions: as parts of a whole, parts of a set, and division of whole numbers by whole numbers.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compute with whole numbers, decimals, and fractions and understand the relationship among decimals, fractions, and percents. They understand the relative magnitudes of numbers. They understand prime and composite numbers.	Number Sense	5.1.6 Describe and identify prime and composite numbers.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compute with whole numbers, decimals, and fractions and understand the relationship among decimals, fractions, and percents. They understand the relative magnitudes of numbers. They understand prime and composite numbers.	Number Sense	5.1.7 Identify on a number line the relative position of simple positive fractions, positive mixed numbers, and positive decimals.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 2: Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.	Computation	5.2.1 Solve problems involving multiplication and division of any whole numbers.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 2: Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.	Computation	5.2.2 Add and subtract fractions (including mixed numbers) with different denominators.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.	Computation	5.2.3 Use models to show an understanding of multiplication and division of fractions.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.	Computation	5.2.4 Multiply and divide fractions to solve problems.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.	Computation	5.2.5 Add and subtract decimals and verify the reasonableness of the results.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 2: Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.	Computation	5.2.6 Use estimation to decide whether answers are reasonable in addition, subtraction, multiplication, and division problems.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 2: Students solve problems involving multiplication and division of whole numbers and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.	Computation	5.2.7 Use mental arithmetic to add or subtract simple decimals.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 3: Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.	Algebra and Functions	5.3.1 Use a variable to represent an unknown number.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 3: Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.	Algebra and Functions	5.3.2 Write simple algebraic expressions in one or two variables and evaluate them by substitution.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 3: Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.	Algebra and Functions	5.3.3 Use the distributive property in numerical equations and expressions.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Math	Standard 3: Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.	Algebra and Functions	5.3.4 Identify and graph ordered pairs of positive numbers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 3: Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.	Algebra and Functions	5.3.5 Find ordered pairs (positive numbers only) that fit a linear equation, graph the ordered pairs, and draw the line they determine.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 3: Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.	Algebra and Functions	5.3.6 Understand that the length of a horizontal line segment on a coordinate plane equals the difference between the x-coordinates and that the length of a vertical line segment on a coordinate plane equals the difference between the y-coordinates.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 3: Students use variables in simple expressions, compute the value of an expression for specific values of the variable, and plot and interpret the results. They use two-dimensional coordinate grids to represent points and graph lines.	Algebra and Functions	5.3.7 Use information taken from a graph or equation to answer questions about a problem situation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.1 Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, triangles, and circles by using appropriate tools (e.g., ruler, compass, protractor, appropriate technology, media tools).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.2 Identify, describe, draw, and classify triangles as right, acute, obtuse, and equiangular.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.3 Identify congruent triangles and justify your decisions by referring to sides and angles.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.4 Identify, describe, draw, and classify polygons, such as pentagons and hexagons.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.5 Identify and draw the radius and diameter of a circle and understand the relationship between the radius and diameter.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.6 Identify shapes that have reflectional and rotational symmetry.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.7 Understand that 90° , 180° , 270° , and 360° are associated with quarter, half, three-quarters, and full turns, respectively.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.8 Construct prisms and pyramids using appropriate materials.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	5.4.9 Given a picture of a three-dimensional object, build the object with blocks.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 5: Students understand and compute the areas and volumes of simple objects, as well as measuring weight, temperature, time, and money.	Measurement	5.5.1 Understand and apply the formulas for the area of a triangle, parallelogram, and trapezoid.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand and compute the areas and volumes of simple objects, as well as measuring weight, temperature, time, and money.	Measurement	5.5.2 Solve problems involving perimeters and areas of rectangles, triangles, parallelograms, and trapezoids, using appropriate units.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 5: Students understand and compute the areas and volumes of simple objects, as well as measuring weight, temperature, time, and money.	Measurement	5.5.3 Use formulas for the areas of rectangles and triangles to find the area of complex shapes by dividing them into basic shapes.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand and compute the areas and volumes of simple objects, as well as measuring weight, temperature, time, and money.	Measurement	5.5.4 Find the surface area and volume of rectangular solids using appropriate units.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand and compute the areas and volumes of simple objects, as well as measuring weight, temperature, time, and money.	Measurement	5.5.5 Understand and use the smaller and larger units for measuring weight (ounce, gram, and ton) and their relationship to pounds and kilograms.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand and compute the areas and volumes of simple objects, as well as measuring weight, temperature, time, and money.	Measurement	5.5.6 Compare temperatures in Celsius and Fahrenheit, knowing that the freezing point of water is 0°C and 32°F and that the boiling point is 100°C and 212°F .	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students understand and compute the areas and volumes of simple objects, as well as measuring weight, temperature, time, and money.	Measurement	5.5.7 Add and subtract with money in decimal notation.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	5.6.1 Explain which types of displays are appropriate for various sets of data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	5.6.2 Find the "mean," "median," "mode," and "range" of a set of data and describe what each does and does not tell about the data set.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 6: Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings. They show outcomes for simple probability situations.	Data Analysis and Probability	5.6.3 Understand that probability can take any value between 0 and 1, events that are not going to occur have probability 0, events certain to occur have probability 1, and more likely events have a higher probability than less likely events.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	5.6.4 Express outcomes of experimental probability situations verbally and numerically (e.g., 3 out of 4, $\frac{3}{4}$).	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.2 Decide when and how to break a problem into simpler parts.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.3 Apply strategies and results from simpler problems to solve more complex problems.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.4 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.5 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.6 Know and apply appropriate methods for estimating results of rational-number computations.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.7 Make precise calculations and check the validity of the results in the context of the problem.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.8 Decide whether a solution is reasonable in the context of the original situation.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	5.7.9 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.	Word Problem Shape-Up Set 1, 2, 3

Grade 6

Subhead	Standard	Strand	Benchmark	Merit Software
Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	6.1.1 Understand and apply the basic concept of negative numbers (e.g., on a number line, in counting, in temperature, in "owing").	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	6.1.2 Interpret the absolute value of a number as the distance from zero on a number line, and find the absolute value of real numbers.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	6.1.3 Compare and represent on a number line positive and negative integers, fractions, decimals (to hundredths), and mixed numbers.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	6.1.4 Convert between any two representations of numbers (fractions, decimals, and percents) without the use of a calculator.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	6.1.5 Recognize decimal equivalents for commonly used fractions without the use of a calculator.	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	6.1.6 Use models to represent ratios.	Word Problem Shape-Up Set 1, 2, 3

Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	6.1.7 Find the least common multiple and the greatest common factor of whole numbers. Use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction).	Word Problem Shape-Up Set 1, 2, 3; Fraction Shape-Up
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.1 Add and subtract positive and negative integers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.2 Multiply and divide positive and negative integers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.3 Multiply and divide decimals.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.4 Explain how to multiply and divide positive fractions and perform the calculations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.5 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.6 Interpret and use ratios to show the relative sizes of two quantities. Use the notations: a/b , a to b , $a:b$.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.7 Understand proportions and use them to solve problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.8 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.9 Use estimation to decide whether answers are reasonable in decimal problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 2: Students solve problems involving addition, subtraction, multiplication, and division of integers. They solve problems involving fractions, decimals, ratios, proportions, and percentages.	Computation	6.2.10 Use mental arithmetic to add or subtract simple fractions and decimals.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.1 Write and solve one-step linear equations and inequalities in one variable and check the answers.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.2 Write and use formulas with up to three variables to solve problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.3 Interpret and evaluate mathematical expressions that use grouping symbols such as parentheses.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.4 Use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.5 Use variables in expressions describing geometric quantities.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.6 Apply the correct order of operations and the properties of real numbers (e.g., identity, inverse, commutative, associative, and distributive properties) to evaluate numerical expressions. Justify each step in the process.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.7 Identify and graph ordered pairs in the four quadrants of the coordinate plane.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.8 Solve problems involving linear functions with integer values. Write the equation and graph the resulting ordered pairs of integers on a grid.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students write verbal expressions and sentences as algebraic expressions and equations. They evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results. They investigate geometric relationships and describe them algebraically.	Algebra and Functions	6.3.9 Investigate how a change in one variable relates to a change in a second variable.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 4: Students identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them.	Geometry	6.4.5 Identify and draw two-dimensional shapes that are similar.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 5: Students deepen their understanding of the measurement of plane and solid shapes and use this understanding to solve problems. They calculate with temperature and money, and choose appropriate units of measure in other areas.	Measurement	6.5.1 Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 5: Students deepen their understanding of the measurement of plane and solid shapes and use this understanding to solve problems. They calculate with temperature and money, and choose appropriate units of measure in other areas.	Measurement	6.5.9 Use a formula to convert temperatures between Celsius and Fahrenheit.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 5: Students deepen their understanding of the measurement of plane and solid shapes and use this understanding to solve problems. They calculate with temperature and money, and choose appropriate units of measure in other areas.	Measurement	6.5.10 Add, subtract, multiply, and divide with money in decimal notation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students compute and analyze statistical measures for data sets. They determine theoretical and experimental probabilities and use them to make predictions about events.	Data Analysis and Probability	6.6.1 Organize and display single-variable data in appropriate graphs and stem-and-leaf plots, and explain which types of graphs are appropriate for various data sets.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students compute and analyze statistical measures for data sets. They determine theoretical and experimental probabilities and use them to make predictions about events.	Data Analysis and Probability	6.6.2 Make frequency tables for numerical data, grouping the data in different ways to investigate how different groupings describe the data. Understand and find relative and cumulative frequency for a data set. Use histograms of the data and of the relative frequency distribution, and a broken line graph for cumulative frequency, to interpret the data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 6: Students compute and analyze statistical measures for data sets. They determine theoretical and experimental probabilities and use them to make predictions about events.	Data Analysis and Probability	6.6.3 Compare the mean, median, and mode for a set of data and explain which measure is most appropriate in a given context.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	6.6.4 Show all possible outcomes for compound events in an organized way and find the theoretical probability of each outcome.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	6.6.5 Use data to estimate the probability of future events.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	6.6.6 Understand and represent probabilities as ratios, measures of relative frequency, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.2 Make and justify mathematical conjectures based on a general description of a mathematical question or problem.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.3 Decide when and how to break a problem into simpler parts.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.4 Apply strategies and results from simpler problems to solve more complex problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.5 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.6 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.7 Select and apply appropriate methods for estimating results of rational-number computations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.8 Use graphing to estimate solutions and check the estimates with analytic approaches.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.9 Make precise calculations and check the validity of the results in the context of the problem.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.10 Decide whether a solution is reasonable in the context of the original situation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	6.7.11 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Grade 7

Subhead	Standard	Strand	Benchmark	Merit Software
Math	Standard 1: Students understand and use scientific notation and square roots. They convert between fractions and decimals.	Number Sense	7.1.1 Read, write, compare, and solve problems using whole numbers in scientific notation.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 1: Students understand and use scientific notation and square roots. They convert between fractions and decimals.	Number Sense	7.1.2 Compare and order irrational numbers and place them on a number line.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 1: Students understand and use scientific notation and square roots. They convert between fractions and decimals.	Number Sense	7.1.3 Identify rational and common irrational numbers from a list.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 1: Students compare and order positive and negative integers, decimals, fractions, and mixed numbers. They find multiples and factors.	Number Sense	7.1.4 Understand and compute whole number powers of whole numbers.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving integers, fractions, decimals, ratios, and percentages.	Computation	7.2.1 Solve addition, subtraction, multiplication, and division problems that use integers, fractions, decimals, and combinations of the four operations.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving integers, fractions, decimals, ratios, and percentages.	Computation	7.2.2 Calculate the percentage increase and decrease of a quantity.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 2: Students solve problems involving integers, fractions, decimals, ratios, and percentages.	Computation	7.2.3 Solve problems that involve discounts, markups, and commissions.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve problems involving integers, fractions, decimals, ratios, and percentages.	Computation	7.2.4 Use estimation to decide whether answers are reasonable in problems involving fractions and decimals.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and graphs.	Algebra and Functions	7.3.1 Use variables and appropriate operations to write an expression, a formula, an equation, or an inequality that represents a verbal description.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and graphs.	Algebra and Functions	7.3.2 Write and solve two-step linear equations and inequalities in one variable and check the answers.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and graphs.	Algebra and Functions	7.3.3 Use correct algebraic terminology, such as variable, equation, term, coefficient, inequality, expression, and constant.	Basic Algebra Shape-Up Set 1 & 2

Math	Standard 3: Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and graphs.	Algebra and Functions	7.3.4 Evaluate numerical expressions and simplify algebraic expressions by applying the correct order of operations and the properties of rational numbers (e.g. identity, inverse, commutative, associative, distributive). Justify each step in the process.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 5: Students compare units of measure and use similarity to solve problems. They compute the perimeter, area, and volume of common geometric objects and use the results to find measures of less regular objects.	Measurement	7.5.1 Compare lengths, areas, volumes, weights, capacities, times, and temperatures within measurement systems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 5: Students compare units of measure and use similarity to solve problems. They compute the perimeter, area, and volume of common geometric objects and use the results to find measures of less regular objects.	Measurement	7.5.5 Estimate and compute the area of more complex or irregular two-dimensional shapes by dividing them into more basic shapes.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, organize, and represent data sets and identify relationships among variables within a data set. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	7.6.1 Analyze, interpret, and display data in appropriate bar, line, and circle graphs and stem-and-leaf plots and justify the choice of display.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 6: Students collect, organize, and represent data sets and identify relationships among variables within a data set. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	7.6.2 Make predictions from statistical data.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, organize, and represent data sets and identify relationships among variables within a data set. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	7.6.3 Describe how additional data, particularly outliers, added to a data set may affect the mean, median, and mode.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	7.6.4 Analyze data displays, including ways that they can be misleading. Analyze ways in which the wording of questions can influence survey results.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	7.6.5 Know that if P is the probability of an event occurring, then $1 - P$ is the probability of that event not occurring.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	7.6.6 Understand that the probability of either one or the other of two disjoint events occurring is the sum of the two individual probabilities.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, display, analyze, compare, and interpret data sets. They use the results of probability experiments to predict future events.	Data Analysis and Probability	7.6.7 Find the number of possible arrangements of several objects using a tree diagram.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.2 Make and justify mathematical conjectures based on a general description of a mathematical question or problem.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.3 Decide when and how to break a problem into simpler parts.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.4 Apply strategies and results from simpler problems to solve more complex problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.5 Make and test conjectures by using inductive reasoning.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.6 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.7 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.8 Select and apply appropriate methods for estimating results of rational-number computations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.9 Use graphing to estimate solutions and check the estimates with analytic approaches.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.10 Make precise calculations and check the validity of the results in the context of the problem.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.11 Decide whether a solution is reasonable in the context of the original situation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	7.7.12 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Grade 8

Subhead	Standard	Strand	Benchmark	Merit Software
Math	Standard 1: Students know the properties of rational and irrational numbers expressed in a variety of forms. They understand and use exponents, powers, and roots.	Number Sense	8.1.1 Read, write, compare, and solve problems using whole numbers in scientific notation.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 1: Students know the properties of rational and irrational numbers expressed in a variety of forms. They understand and use exponents, powers, and roots.	Number Sense	8.1.2 Know that every rational number is either a terminating or repeating decimal and that every irrational number is a nonrepeating decimal.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 1: Students know the properties of rational and irrational numbers expressed in a variety of forms. They understand and use exponents, powers, and roots.	Number Sense	8.1.3 Understand that computations with an irrational number and a rational number (other than zero) produce an irrational number.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students compute with rational numbers expressed in a variety of forms. They solve problems involving ratios, proportions, and percentages.	Computation	8.2.1 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) in multi-step problems.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students compute with rational numbers expressed in a variety of forms. They solve problems involving ratios, proportions, and percentages.	Computation	8.2.2 Solve problems by computing simple and compound interest.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students solve simple linear equations and inequalities. They interpret and evaluate expressions involving integer powers. They graph and interpret functions. They understand the concepts of slope and rate.	Algebra and Functions	8.3.1 Write and solve linear equations and inequalities in one variable, interpret the solution or solutions in their context, and verify the reasonableness of the results.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and graphs.	Algebra and Functions	8.3.2 Solve systems of two linear equations using the substitution method and identify approximate solutions graphically.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and graphs.	Algebra and Functions	8.3.3 Interpret positive integer powers as repeated multiplication and negative integer powers as repeated division or multiplication by the multiplicative inverse.	Basic Algebra Shape-Up Set 1 & 2

Math	Standard 3: Students express quantitative relationships using algebraic terminology, expressions, equations, inequalities, and graphs.	Algebra and Functions	8.3.4 Use the correct order of operations to find the values of algebraic expressions involving powers.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 5: Students convert between units of measure and use rates and scale factors to solve problems. They compute the perimeter, area, and volume of geometric objects. They investigate how perimeter, area, and volume are affected by changes of scale.	Measurement	8.5.1 Convert common measurements for length, area, volume, weight, capacity, and time to equivalent measurements within the same system.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 5: Students convert between units of measure and use rates and scale factors to solve problems. They compute the perimeter, area, and volume of geometric objects. They investigate how perimeter, area, and volume are affected by changes of scale.	Measurement	8.5.2 Solve simple problems involving rates and derived measurements for attributes such as velocity and density.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Math	Standard 5: Students convert between units of measure and use rates and scale factors to solve problems. They compute the perimeter, area, and volume of geometric objects. They investigate how perimeter, area, and volume are affected by changes of scale.	Measurement	8.5.3 Solve problems involving scale factors, area, and volume using ratio and proportion.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 5: Students convert between units of measure and use rates and scale factors to solve problems. They compute the perimeter, area, and volume of geometric objects. They investigate how perimeter, area, and volume are affected by changes of scale.	Measurement	8.5.4 Use formulas for finding the perimeter and area of basic two-dimensional shapes and the surface area and volume of basic three-dimensional shapes, including rectangles, parallelograms, trapezoids, triangles, circles, prisms, cylinders, spheres, cones, and pyramids.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 5: Students convert between units of measure and use rates and scale factors to solve problems. They compute the perimeter, area, and volume of geometric objects. They investigate how perimeter, area, and volume are affected by changes of scale.	Measurement	8.5.5 Estimate and compute the area of irregular two-dimensional shapes and volume of irregular three-dimensional objects by breaking them down into more basic geometric objects.	Word Problem Shape-Up Set 1, 2, 3
Math	Standard 6: Students collect, organize, represent, and interpret relationships in data sets that have one or more variables. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	8.6.1 Identify claims based on statistical data and, in simple cases, evaluate the reasonableness of the claims. Design a study to investigate the claim.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 6: Students collect, organize, and represent data sets and identify relationships among variables within a data set. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	8.6.2 Identify different methods of selecting samples, analyzing the strengths and weaknesses of each method, and the possible bias in a sample or display.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, organize, and represent data sets and identify relationships among variables within a data set. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	8.6.3 Understand the meaning of, and be able to identify or compute the minimum value, the lower quartile, the median, the upper quartile, the interquartile range, and the maximum value of a data set.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 6: Students collect, organize, and represent data sets and identify relationships among variables within a data set. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	8.6.6 Understand and recognize equally likely events.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 6: Students collect, organize, and represent data sets and identify relationships among variables within a data set. They determine probabilities and use them to make predictions about events.	Data Analysis and Probability	8.6.7 Find the number of possible arrangements of several objects by using the Basic Counting Principle.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.2 Make and justify mathematical conjectures based on a general description of a mathematical question or problem.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.3 Decide when and how to break a problem into simpler parts.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.4 Apply strategies and results from simpler problems to solve more complex problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.5 Make and test conjectures by using inductive reasoning.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.6 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.7 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.8 Select and apply appropriate methods for estimating results of rational-number computations.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.9 Use graphing to estimate solutions and check the estimates with analytic approaches.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.10 Make precise calculations and check the validity of the results in the context of the problem.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.11 Decide whether a solution is reasonable in the context of the original situation.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 7: Students make decisions about how to approach problems and communicate their ideas.	Problem Solving	8.7.12 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Algebra I

Subhead	Standard	Strand	Benchmark	Merit Software
Math	Standard 1: Students simplify and compare expressions. They use rational exponents and simplify square roots.	Operations With Real Numbers	A1.1.1 Compare real number expressions	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 1: Students simplify and compare expressions. They use rational exponents and simplify square roots.	Operations With Real Numbers	A1.1.3 Understand and use the distributive, associative, and commutative properties.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 1: Students simplify and compare expressions. They use rational exponents and simplify square roots.	Operations With Real Numbers	A1.1.4 Use the laws of exponents for rational exponents.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve linear equations and inequalities in one variable. They solve word problems that involve linear equations, inequalities, or formulas.	Linear Equations and Inequalities	A1.2.1 Solve linear equations.	Basic Algebra Shape-Up Set 1 & 2

Math	Standard 2: Students solve linear equations and inequalities in one variable. They solve word problems that involve linear equations, inequalities, or formulas.	Linear Equations and Inequalities	A1.2.2 Solve equations and formulas for a specified variable.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve linear equations and inequalities in one variable. They solve word problems that involve linear equations, inequalities, or formulas.	Linear Equations and Inequalities	A1.2.3 Find solution sets of linear inequalities when possible numbers are given for the variable.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve linear equations and inequalities in one variable. They solve word problems that involve linear equations, inequalities, or formulas.	Linear Equations and Inequalities	A1.2.4 Solve linear inequalities using properties of order.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve linear equations and inequalities in one variable. They solve word problems that involve linear equations, inequalities, or formulas.	Linear Equations and Inequalities	A1.2.5 Solve combined linear inequalities.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 2: Students solve linear equations and inequalities in one variable. They solve word problems that involve linear equations, inequalities, or formulas.	Linear Equations and Inequalities	A1.2.6 Solve word problems that involve linear equations, formulas, and inequalities.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students sketch and interpret graphs representing given situations. They understand the concept of a function and analyze the graphs of functions.	Relations and Functions	A1.3.1 Sketch a reasonable graph for a given relationship	Basic Algebra Shape-Up Set 1 & 2

Math	Standard 3: Students sketch and interpret graphs representing given situations. They understand the concept of a function and analyze the graphs of functions.	Relations and Functions	A1.3.2 Interpret a graph representing a given situation.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students sketch and interpret graphs representing given situations. They understand the concept of a function and analyze the graphs of functions.	Relations and Functions	A1.3.3 Understand the concept of a function, decide if a given relation is a function, and link equations to functions.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 3: Students sketch and interpret graphs representing given situations. They understand the concept of a function and analyze the graphs of functions.	Relations and Functions	A1.3.4 Find the domain and range of a relation.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 4: Students graph linear equations and inequalities in two variables. They write equations of lines and find and use the slope and y-intercept of lines. They use linear equations to model real data.	Graphing Linear Equations and Inequalities	A1.4.1 Graph a linear equation.	Basic Algebra Shape-Up Set 1 & 2
Math	Standard 4: Students graph linear equations and inequalities in two variables. They write equations of lines and find and use the slope and y-intercept of lines. They use linear equations to model real data.	Graphing Linear Equations and Inequalities	A1.4.2 Find the slope, x-intercept, and y-intercept of a line given its graph, its equation, or two points on the line.	Basic Algebra Shape-Up Set 1 & 2

Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.1 Use a variety of problem-solving strategies, such as drawing a diagram, making a chart, guess-and-check, solving a simpler problem, writing an equation, and working backwards.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.2 Decide whether a solution is reasonable in the context of the original situation.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.3 Use the properties of the real number system and the order of operations to justify the steps of simplifying functions and solving equations.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.4 Understand that the logic of equation solving begins with the assumption that the variable is a number that satisfies the equation and that the steps taken when solving equations create new equations that have, in most cases, the same solution set as the original. Understand that similar logic applies to solving systems of equations simultaneously.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.5 Decide whether a given algebraic statement is true always, sometimes, or never (statements involving linear or quadratic expressions, equations, or inequalities).	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2

Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.6 Distinguish between inductive and deductive reasoning, identifying and providing examples of each.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.7 Identify the hypothesis and conclusion in a logical deduction.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2
Math	Standard 9: Students use a variety of strategies to solve problems. Students develop and evaluate mathematical arguments and proofs.	Mathematical Reasoning and Problem Solving	A1.9.8 Use counterexamples to show that statements are false, recognizing that a single counterexample is sufficient to prove a general statement false.	Word Problem Shape-Up Set 1, 2, 3; Basic Algebra Shape-Up Set 1 & 2