

Standards Correlation: Symphony Math® and Georgia Performance Standards

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|---|-------------------------|--|
| Standard | Description | Stage References | Concepts |
| K.NR.1.1 | Count up to 20 objects in a variety of structured arrangements and up to 10 objects in a scattered arrangement. | 1.1, 1.3, 1.4, | Sequencing, Counting Forward, Counting Backward/variety of arrangements |
| K.NR.1.2 | When counting objects, explain that the last number counted represents the total quantity in a set (cardinality), regardless of the arrangement and order. | 1.1, 1.2 | Identifying Numbers (connection between models and numbers pervasive throughout curriculum); match quantity to last number counted, include subitizing |
| K.NR.1.3 | Given a number from 1-20, identify the number that is one more or one less. | 2.1-2.5 | Find 'One More', Find 'One Less', Find 'More', Find 'Less', Find Same. |
| K.NR.2.1 | Count forward to 100 by tens and ones and backwards from 20 by ones. | 4.1-4.3, 7.1-7.3 | Identify tens as a unit, Making 10, 10 Plus, Count forward and backwards by 10 to 100. |
| K.NR.2.2 | Count forward beginning from any number within 100 and count backward from any number within 20. | 7.1-7.3 | Making 10, 10 Plus, Count forward and backwards by 10 to 100. |
| K.NR.3.1 | Describe numbers from 11 to 19 by composing (putting together) and decomposing (breaking apart) the numbers into tens ones and some more ones. | 4.1-4.4 | Making 10, 10 Plus, Sums to 19 as 10 + some more, Subtracting with 10. |
| K.NR.4.1 | Identify written numerals 0-20 and represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). | 4.1-4.4 | Recognize objects and combination to 5, then 0-19 with models, numbers, auditory, and written expressions. |
| K.NR.4.2 | Compare two sets of up to 10 objects and identify whether the number of objects in one group is more or less than the other group, using the words "greater than," "less than," or "the same as." | 2.1-2.5 | Find 'One More', Find 'One Less', Find 'More', Find 'Less', Same |
| K.NR.5.1 | Compose (put together) and decompose (break apart) numbers up to 10 using objects and drawings. | 3.1-3.7, 4.1, 4.2, -4.4 | Addition & Subtraction to sums of 5, and parts of 10, with models, numbers, auditory, and written expressions. |
| K.NR.5.2 | Represent addition and subtraction within 10 from a given authentic situation using a variety of representations and strategies. | 4.1-4.4 | Addition & Subtraction to sums of 5, and parts of 10, with varying models, numbers, auditory, and written expressions. Word problems included. |
| K.NR.5.3 | Use a variety of strategies to solve addition and subtraction problems within 10. | 3.1—3.7, 4.1, 4.2, | Addition & Subtraction to sums of 5 and 10 in both conceptual and fluency environments. Models represent a variety of strategies. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|---|--|--|
| Standard | Description | Stage References | Concepts |
| K.NR.5.4 | Fluently add and subtract within 5 using a variety of strategies to solve practical, mathematical problems. | 3.1-3.7, MR1, MR2 | Addition & Subtraction to sums of 5, in both conceptual and fluency environments. Models represent a variety of strategies. |
| K.MDR.7.1 | Directly compare, describe and order common objects, using measurable attributes, (length, height, width or weight) and describe the difference. | 2.1-2.5, Weekly Challenge Wk 3, 14, 16, 18, 19, 36 | Find 'More', Find 'Taller', Find 'Shorter, etc., Compare objects using measurable attributes and describe the difference. |
| K.MDR.7.2 | Classify and sort up to ten objects into categories by an attribute; count the number of objects in each category and sort the categories by count. | Weekly Challenge Wk 2, 4, 5, 15, 19, 29 | Sort objects into categories, count the number of objects in each category. |
| K.GSR.8.1 | Identify, sort, classify analyze, and compare two-dimensional shapes and three-dimensional figures, in different sizes and orientations, using informal language to describe their similarities, differences, number of sides, vertices and other attributes. | Weekly Challenge Wk: 8, 10, 13, 17, 20, 25, 27, 28, 30, 34 | Sort, classify and compare two and three-dimensional figures using informal language to describe similarities and differences. |
| K.GSR.8.2 | Describe the relative location of an object using positional words. | Weekly Challenge Wk: 6, 31, 32 | Use positional words to describe the relative location of objects. |
| K.GSR.8.3 | Use basic shapes to represent specific shapes found in the environment by creating models and drawings. | Weekly Challenge Wk: 8, 13, 17, 20, 28, 30, 31 | Use basic shapes to represent specific shapes found in the environment. |
| K.GSR.8.4 | Use two or more basic shapes to form larger shapes. | Weekly Challenge Wk: 8, 13, 17 | Use basic shapes to form larger shapes. |
| 1.NR.1.1 | Extend the count sequence to 120. Read, write, and represent numerical values to 120 and compare numerical values to 100. | 7.1-7.9, 9.1-9.3 | Identifying, ordering, comparing, counting forwards and backwards to 10, 100. |
| 1.NR.1.2 | Explain that the two digits of a 2-digit number represent the amounts of tens and ones. | 4.1, 4.2, 4.3 | 10 as a unit, making 10, parts of 10 plus some more in tens and ones. |
| 1.NR.1.3 | Compare and order whole numbers up to 100 using concrete models, drawings, and the symbols $>$, $=$, and $<$. | 5.2, 5.3, 7.5, 7.5, 7.9, 8.9 | Using visual models, compare and order whole numbers up to 100 using comparison notation signs. |
| 1.NR.2.1 | Use a variety of strategies to solve addition and subtraction problems within 20. | 6.1-6.6 | Add and subtract to 20 with visual models and numbers; missing result, missing change, fact families, 3-part addition and subtraction. |
| 1.NR.2.2 | Use pictures, drawings, and equations to develop strategies for addition and subtraction within 20 by exploring strings of related problems. | 6.1-6.6 | Use pictures, drawings, and equations to solve missing result and missing change, and related fact problems. |
| 1.NR.2.3 | Recognize the inverse relationship between subtraction and addition within 20 and use this inverse relationship to solve authentic problems. | 6.1-6.4, 6.5 | Addition and subtraction as an inverse relationship; fact families. |
| 1.NR.2.4 | Fluently add and subtract within 10 using a variety of strategies. | MR 1, MR 2, MR 3, MR 4 | Fluency rounds; add/subtract to 5, 10; missing result and change. |
| 1.NR.2.5 | Use the meaning of the equal sign to determine whether equations involving addition and subtraction are true or false. | 3.1-3.4, 4.1-4.4, 6.1-6.6 | Equal sign presented on left and right side of number sentences throughout the program. |
| 1.NR.2.6 | Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. | 3.1, 3.3, 4.1, 4.3, 6.1, 6.3 | Place Value Addition: Missing Result and Missing Part; Place Value Subtraction: Missing Result and Missing Change |
| 1.NR.2.7 | Apply properties of operations as strategies to solve addition and subtraction problem situations within 20. | 3.7, 6.5 | Commutative property, Fact families. |
| 1.GSR.4.1 | Identify common two-dimensional shapes and three-dimensional figures, sort and classify them by their attributes and build and draw shapes that possess defining attributes. | Weekly Challenge Wk; 8, 12, 13, 17, 33, 35 | Identify 2- and 3-dimensional shapes in environments and describe their attributes. |
| 1.GSR.4.2 | Compose two-dimensional shapes and three-dimensional figures to create a shape formed of two or more common shapes and compose new shapes from the composite shape. | Weekly Challenge Wk; 8, 12, 17, 33, 35 | Find and identify smaller shapes and combine to make composite shapes. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|--|---|---|
| Standard | Description | Stage References | Concepts |
| 1.NR.5.1 | Use a variety of strategies to solve applicable, mathematical addition and subtraction problems with one- and two-digit whole numbers. | 6.1-6.6, 7.6-7.8, 8.1-8.8 | Solve 1- and 2-digit addition and subtraction problems using a variety of models and numbers. |
| 1.NR.5.2 | Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. | 7.4, 7.5 | Find 10 more and 10 less with models and numbers. |
| 1.NR.5.3 | Add and subtract multiples of 10 within 100. | 7.4-7.7 | Find '10 more,' '10 less,' combinations of 100 using multiples of 10. |
| 1.MDR6.1 | Estimate, measure, and record lengths of objects using non-standard units, and compare and order up to three objects using the recorded measurements. Describe the objects compared. | Weekly Challenge Wk; 10, 17, 28 | Estimate lengths of objects in different environments, order by length. |
| 1.MDR6.2 | Tell and write time in hours and half-hours using analog and digital clocks, and measure elapsed time to the hour on the hour using a predetermined number line. | Weekly Challenge Wk; 20, 31 | Tell and write time using analog and digital clocks in different environments. |
| 1.MDR6.4 | Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to compare and order whole numbers. | Weekly Challenge Wk; 3, 18, 21 | Observe and count data in different environments and answer questions based on information gathered. |
| 2.NR.1.1 | Explain the value of a three-digit number using hundreds, tens, and ones in a variety of ways. | 9.1-9.6, 10.1, 10.3 | Parts to whole with 1s, 10s, and 100s. |
| 2.NR.1.2 | Count forward and backward by ones from any number within 1000. Count forward by fives from multiples of 5 within 1000. Count forward and backward by 10s and 100s from any number within 1000. Count forward by 25s from 0. | 7.4, 7.5, 9.2, 9.3, 11.1 | Count forward and backward, by 100s, skip count by 5s, 10s, 100s. |
| 2.NR.1.3 | Represent, compare, and order whole numbers to 1000 with an emphasis on place value and equality. Use $>$, $=$, and $<$ symbols to record the results of comparisons. | 9.1-9.8 | Identify, order, compare numbers to 1000 with models and numbers. Use $>$, $=$, and $<$ symbols to record the comparisons. |
| 2.NR.2.1 | Fluently add and subtract within 20 using a variety of mental, part-whole strategies. | 6.1-6.6, MR 3,4, 5, 6 | Add and subtract to 20 with visual models and numbers; missing result, missing change, fact families, 3-part addition and subtraction. Fluency rounds to 10 and 20. |
| 2.NR.2.2 | Find 10 more or 10 less than a given three-digit number and find 100 more or 100 less than a given three-digit number. | 9.4-9.6 | Find 100 more, 100 less, use prior combinations to 10 to solve addition and subtraction with 3-digit numbers. |
| 2.NR.2.3 | Solve problems involving the addition and subtraction of two-digit numbers using part whole strategies. | 8.1-8.4 | Place value addition and subtraction using part-whole strategies. |
| 2.NR.2.4 | Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. | 12.6-7, MR 7, MR 8 | Regroup with 3-digit Numbers to 1000: Addition and Subtraction; Fluency with Addition & Subtraction Facts to 200 (i.e. $90 + 20 = ?$) |
| 2.NR.3.1 | Determine whether a group (up to 20) has an odd or even number of objects. Write an equation to express an even number as a sum of two equal addends. | 11.1-11.2, Weekly Challenge Wk; 5, 22, 35, 36 | Foundations of multiplication, skip count by 2's, recognize number of objects as even or odd. |
| 2.NR.3.2 | Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. | 11.1, 11.2, 13.1-13.3, Weekly Challenge Wk; 7 | Adding with equal groupings, Use array model to find missing product, number of groups, and group size. |
| 2.MDR.5.4 | Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life. | Weekly Challenge Wk; 6, 9, 18, 24 | Observe and gather information from environment to create and answer questions about graphical displays. |
| 2.MDR.6.1 | Tell and write time from analog and digital clocks to the nearest five minutes, and estimate and measure elapsed time using a timeline, to the hour or half hour on the hour or half hour. | Weekly Challenge Wk 20, 31 | Tell time to the nearest five minutes. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|---|-------------------------------------|--|
| Standard | Description | Stage References | Concepts |
| 2. GSR.7.1 | Describe, compare and sort 2-D shapes including polygons, triangles, quadrilaterals, pentagons, hexagons, and 3-D shapes including rectangular prisms and cones, given a set of attributes. | Weekly Challenge Wk; 12, 13, 17, 26 | Recognize, describe and sort 2-D and 3-D shapes in an environment. |
| 2. GSR.7.3 | Partition circles and rectangles into two, three, or four equal shares. Identify and describe equal-sized parts of the whole using fractional names ("halves," "thirds," "fourths," "half of," "third of," "quarter of," etc.). | Weekly Challenge Wk; 10, 11, 33 | Recognize equally partitioned shapes as halves, thirds, fourths, half of, etc. |
| 3.NR.1.1 | Read and write multi-digit whole numbers up to 10,000 using base-ten numerals and expanded form. | 10.2, 10.5 | Part to whole with tens, hundreds, thousands; composing and decomposing parts to 1000s. |
| 3.NR.1.2 | Use place value reasoning to compare multi-digit numbers up to 10,000, using $>$, $=$, and $<$ symbols to record the results of comparisons. | 10.8 | Compare multi-digit numbers |
| 3.PAR.2.1 | Fluently add and subtract within 1000 to solve problems. | 10.1-10.8, MR 8 | Apply base 10 principles to add and subtract large numbers; Fluency rounds |
| 3.PAR.2.2 | Apply part-whole strategies, properties of operations and place value understanding, to solve problems involving addition and subtraction within 10,000. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions. | 10.1-10.8, 12.1-12.5 | Apply part-whole strategies with models and symbols to add and subtract with missing result and change. All problems use place value understanding and solution justification. |
| 3PAR.3.2 | Represent single digit multiplication and division facts using a variety of strategies. Explain the relationship between multiplication and division. | 13.1-13.6 | Use the relationship of multiplication and division to understand both operations; multiply and divide with models and symbols; missing product, group size, group number, and dividend and divisor. |
| 3.PAR.3.3 | Apply properties of operations (i.e. commutative property, associative property, distributive property) to multiply and divide within 100. | 13.1-13.6, 15.1-15.8 | Multiplication and division to 100 with models and symbols; connectivity of multiplication and division through commutative and distributive properties. |
| 3.PAR.3.4 | Use the meaning of the equal sign to determine whether expressions involving addition, subtraction, and multiplication are equivalent. | 12.2-12.5, 15.7, 15.8 | Regrouping to make equivalent expressions, Use of distributive and commutative properties to make equivalent expressions. |
| 3.PAR.3.5 | Use place value reasoning and properties of operations to multiply one-digit whole numbers by multiples of 10, in the range of 10-90. | 15.1-15.8, 16.1-16.4 | Multiply and divide with 1, 10, and 100; part-whole strategies, models show 10 times larger, magnitude of number change through models and symbols. |
| 3.PAR.3.6 | Solve practical, relevant problems involving multiplication and division within 100 using part-whole strategies, visual representations, and/or concrete models. | 15.1-15.8, 16.1-16.4, MR 11 | Multiply and divide with 1, 10, and 100; part-whole strategies with models and symbols; story problems, relationship between multiplication and division. |
| 3.PAR.3.7 | Use multiplication and division to solve problems involving whole numbers to 100. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions. | 15.1-15.8, 16.1-16.4 | Multiply and divide with 1, 10, and 100; part-whole strategies with models and symbols; story problems, relationship between multiplication and division. Solve for unknown results and unknown change. All solutions justified. |
| 3.NR.4.1 | Describe a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction. Use parts of a whole, parts of a set, points on a number line, distances on a number line and area models. | 14.2-14.4 | Create unit and non-unit fractions with area models and number lines. |
| 3.NR.4.2 | Compare two unit fractions by flexibly using a variety of tools and strategies. | 14.5, 14.6 | Compare fractions referring to the same whole. Area models, number lines, and symbols used throughout. |
| 3.NR.4.3 | Represent fractions, including fractions greater than one, in multiple ways. | 14.1-14.6 | Investigate fractions using area models, set models, linear models, and points on a number line. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|---|------------------------------------|--|
| Standard | Description | Stage References | Concepts |
| 3.NR.4.4 | Represent and generate simple equivalent fractions. | 14.4-14.6 | Investigate the relationship between halves, fourths, eighths, thirds and sixths to generate equivalent fractions, including fractions = to 1 whole. |
| 3.MDR.5.1 | Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life. | Weekly Challenge Wk; 9, 24 | Use environment to graph information and answer questions based on the data. |
| 3.MDR.5.2 | Tell and write time to the nearest minute and estimate time to the nearest fifteen minutes (quarter hour) from the analysis of an analog clock. | Weekly Challenge Wk; 20, 31 | Determine time on an analog clock. |
| 3.MDR.5.3 | Solve meaningful problems involving elapsed time, including intervals of time to the hour, half hour, and quarter hour where the times presented are only on the hour, half hour, or quarter hour within a.m. or p.m.only. | Weekly Challenge Wk; 3, 20, 23, 31 | Use environmental information to solve elapsed time word problems. |
| 3.GSR.7.2 | Determine the area of rectangles (or shapes composed of rectangles) presented in relevant problems by tiling and counting. | Weekly Challenge Wk; 28 | Use tiling to determine area. |
| 3.GSR.7.3 | Discover and explain how area can be found by multiplying the dimensions of a rectangle. | Weekly Challenge Wk; 28, 33, 34, | See how the area of a rectangle can be found using its dimensions. |
| 3.GSR.8.1 | Determine the perimeter of a polygon and explain that the perimeter represents the distance around a polygon. Solve problems involving perimeters of polygons. | Weekly Challenge Wk; 12, 19, | Determine the perimeter of a polygon by adding all its side lengths. |
| 4.NR.2.1 | Fluently add and subtract multi digit numbers to solve practical, mathematical problems using place value understanding, properties of operations, and relationships between operations. | 12.1-12.5, 21.1-21.8, MR 8 | Use place value understanding and properties of operations to flexibly and efficiently add and subtract multi-digit numbers. |
| 4.NR.2.2 | Interpret, model, and solve problems involving multiplicative comparison. | 22.1, 22.3 | Multiplicative situations using visual models and equations, solving for the unknown number in different positions. |
| 4.NR.2.3 | Solve relevant problems involving multiplication of a number with up to four digits by a 1-digit whole number or involving multiplication of two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. | 16.1, 16.2, 22.1, 22.3, 22.5 | Use of arrays and area models to show multiplication, multiplication by powers of 10, expanded mode multiplication using place value, including word problems. |
| 4.NR.2.4 | Solve authentic division problems involving up to 4-digit dividends and 1-digit divisors (including whole number quotients with remainders) using strategies based on place value understanding, properties of operations, and the relationship between operations. | 16.3, 16.4, 22.2, 22.4 | Relationship between multiplication and division to solve word problems and other problems with division, including problems with remainders. Place value expanded mode with models and symbols. |
| 4.NR.2.5 | Solve multi-step problems using addition, subtraction, multiplication, and division involving whole numbers. Use mental computation and estimation strategies to justify the reasonableness of solutions | 21.1-21.8, 22.1-22.5 | Use the four operations to solve mathematical problems. Place value strategies, properties, and relationships between operations all used. Word problems included. All solutions justified. |
| 4.NR.4.1 | Using concrete materials, drawings, and number lines, demonstrate and explain the relationship between equivalent fractions, including fractions greater than one, and explain the identity property of multiplication as it relates to equivalent fractions. Generate equivalent fractions using these relationships. | 17.1, 17.2, 20.1-20.4 | Understanding how to compose and decompose fractions greater than 1 whole, including mixed numbers. Compare fractions relating to the same whole. |
| 4.NR.4.2 | Compare two fractions with the same numerator or the same denominator by reasoning about their size and recognize that comparisons are valid only when the two fractions refer to the same whole. | 17.1, 17.2 | Compare fractions with the same numerator or denominator; compose fractions to understand equivalency and size. |
| 4.NR.4.3 | Compare fractions with different numerators and/or denominators by flexibly using a variety of tools and strategies and recognize that comparisons are valid only when the two fractions refer to the same whole. | 14.5, 14.6, 17.2 | Use of visual fraction models to Reason about fraction size in order to compare fractions. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|--|---|--|
| Standard | Description | Stage References | Concepts |
| 4.NR.4.4 | Represent whole numbers and fractions as the sum of unit fractions. | 14.3, 14.4, 17.3-17.4 | Use of models to combine unit fractions to make equivalent fractions and whole numbers. |
| 4.NR.4.5 | Represent a fraction as a sum of fractions with the same denominator in more than one way, recording with an equation. | 17.3, 17.4, 18.1, 18.2 | Use models and symbolic notation to combine fractions with the same denominator. Justify with visual models. |
| 4.NR.4.6 | Add and subtract fractions and mixed numbers with like denominators using a variety of tools. | 17.3-17.6, 18.1-18.4 | Compose and decompose fractions and mixed numbers, justify with visual models. |
| 4.NR.5.1 | Demonstrate and explain the concept of equivalent fractions with denominators of 10 and 100, using concrete materials and visual models. Add two fractions with denominators of 10 and 100. | 19.3, 19.4 | Solve addition of fractions with denominators of 10 and 100 using visual models and symbols. Justify solutions with models. |
| 4.NR.5.2 | Represent, read, and write fractions with denominators of 10 or 100 using decimal notation, and decimal numbers to the hundredths place as fractions using concrete material and drawings. | 19.1, 19.2, 19.5, 19.6 | Recognize and represent decimal number values using models and symbols. |
| 4.NR.5.3 | Compare two decimal numbers to the hundredths place by reasoning about their size. Record the results of the comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions. | 19.1, 19.2, 19.6 | Use visual models to develop part-whole reasoning with decimal numbers, compare quantities using symbols. |
| 4.MDR.6.1 | Use the four operations to solve problems involving...elapsed time, intervals of time.....metric measurements of liquid volumes, lengths, distances and masses...that require expressing measurements given in a larger unit in terms of a smaller unit based on the idea of equivalence. | Weekly Challenge Wk; 2, 4, 8, 9, 15, 16, 18, 22, 23, 27, 31, 36 | Engage with environmental problems that represent all the expectations of this standard. |
| 4.GSR.8.1 | Explore, investigate, and draw points, lines, line segments, rays, angles (right, acute, obtuse), perpendicular lines, parallel lines, and lines of symmetry. Identify these in two-dimensional figures. | Weekly Challenge Wk; 3, 6, 10, 11, 12, 13, 14, 17, 20, 28, 30 | Engage with environmental problems that represent all the expectations of this standard. |
| 4.GSR.8.3 | Solve problems involving area and perimeter of composite rectangles involving whole numbers with known side lengths. | Weekly Challenge Wk; 19, 33, 34, 35 | Engage with environmental problems that represent all the expectations of this standard. |
| 5.NR.1.1 | Explain that in a multi-digit number, a digit in the ones place represents 10 times as much as it represents in the place to its right and $1/10$ of what it represents in the place to its left. | 16.1-16.4, 24.1-24.3 | Understanding number magnitude and place value with powers of 10. |
| 5.NR.1.2 | Explain patterns in the placement of digits when multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. | 24.1-24.3 | Find and explain what happens to the value of a digit as it shifts to the left or right with whole numbers and decimals. |
| 5.NR.2.1 | Fluently multiply multi-digit (up to 3-digit by 2-digit) whole numbers to solve authentic problems. | 22.1, 22.3, 22.5 | Place value and the expanded mode to multiply multi-digit authentic problems. |
| 5.NR.2.2 | Fluently divide multi-digit whole numbers (up to 4-digit dividends and 2-digit divisors no greater than 25) to solve practical problems. | 22.2, 22.4 | Multi-digit division with remainders. |
| 5.NR.3.1 | Explain the meaning of a fraction as division of the numerator by the denominator. Solve problems involving division of whole numbers leading to answers in the forms of fractions or mixed numbers. | 14.1, 20.2, 23.2 Skills Practice Stage 28 | |
| 5.NR.3.2 | Compare and order up to three fractions with different numerators and/or different denominators by flexibly using a variety of tools and strategies. | 14.5 | Compare fractions using visual fraction models. |
| 5.NR.3.3 | Model and solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators. | 20.1-20.4 | Compose and decompose fractions and mixed numbers using visual models and symbolic notation. |
| 5.NR.3.4 | Model and solve problems involving multiplication of a fraction and a whole number. | 23.1-23.5 | Understand a fraction a/b as a multiple of $1/b$, use understanding of equivalency, and multiply whole numbers times fractions and fractions times whole numbers; missing result, missing part. |
| 5.NR.3.5 | Explain why multiplying a whole number by a fraction greater than one results in a product greater than the whole number, and why multiplying a whole number by a fraction less than one results in a product less than the whole number and multiplying a whole number by a fraction equal to one results in a product equal to the whole number. | 23.1-23.3 | Visual models support concepts of fraction multiplication and magnitude. Word problems support the application of magnitude concepts when multiplying fractions and whole numbers. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|---|---|---|
| Standard | Description | Stage References | Concepts |
| 5.NR.3.6 | Model and solve problems involving division of a unit fraction by a whole number and a whole number by a unit fraction. | 23.3, Skills Practice Stage 28 | Understand the inverse relationship between multiplication and division to find missing parts when multiplying with fractions. Visual models support this relationship. |
| 5.NR.4.1 | Read and write decimal numbers to the thousandths place using base-ten numerals written in standard form and expanded form. | 25.1, 25.2 | Understand, read, and write standard and expanded form of base ten numbers including decimal numbers to the thousandths place. Use of models to support reasoning. |
| 5.NR.4.2 | Represent, compare, and order decimal numbers to the thousandths place based on the meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons. | 25.1-25.3 | Use a variety of visual models to determine comparisons of decimal numbers. |
| 5.NR.4.3 | Use place value understanding to round decimal numbers to the hundredths place. | Skills Practice Stage 27 | Visual models are used to round decimal numbers to designated places. |
| 5.NR.4.4 | Solve problems involving addition and subtraction of decimal numbers to the hundredths place using a variety of strategies. | 25.2 | Add and subtract decimal numbers using a variety of strategies and visual models. Justify solutions. |
| 5.NR.5.1 | Write, interpret, and evaluate simple numerical expressions involving whole numbers with or without grouping symbols to represent actual situations. | 25.1, Skills Practice Stage 29 | Use and evaluate numerical expressions with grouping symbols. Word problems included. |
| 5.PAR.6.1 | Represent problems by plotting ordered pairs and explain coordinate values of points in the first quadrant of the coordinate plane. | Skills Practice Stage 31 | Plot points on a coordinate grid, including solutions to word problems. |
| 5.MDR.7.1 | Explore realistic problems involving different units of measurement, including distance, mass, weight, volume, and time. | Skills Practice Stage 30, Weekly Challenge Wk; 2, 4, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 20, 27, 28, 29, 31, 33, 34, 35, 36 | Explore problems using different units of measurement, convert among units and solve multi-step problems from environmental prompts. |
| 5.MDR.7.3 | Convert among units within the metric system and then apply these conversions to solve multistep, practical problems. | Skills Practice Stage 30, Weekly Challenge Wk; 2, 4, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 20, 27, 28, 29, 31, 33, 34, 35, 36 | Explore problems using different units of measurement, convert among units and solve multi-step problems from environmental prompts. |
| 5.MDR.7.4 | Convert among units within relative sizes of measurement units within the customary measurement system. | Skills Practice Stage 30, Weekly Challenge Wk; 2, 4, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 20, 27, 28, 29, 31, 33, 34, 35, 36 | Explore problems using different units of measurement, convert among units and solve multi-step problems from environmental prompts. |
| 5.GSR.8.1 | Classify, compare, and contrast polygons based on properties. | Skills Practice Stage 31 Weekly Challenge Wk; 6, 10, 26, 30 | Explore and compare different properties using their properties. |
| 5.GSR.8.2 | Determine, through exploration and investigation, that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. | Skills Practice Stage 31 | Identify characteristics of 2-dimensional figures and classify them according to a hierarchy. |
| 5.GSR.8.3 | Investigate volume of right rectangular prisms by packing them with unit cubes without gaps or overlaps. Then determine the total volume to solve problems. | Skills Practice Stage 30 | Understand volume of a rectangular prism when filled with unit cubes. Compute the volume |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|--|--|---|
| Standard | Description | Stage References | Concepts |
| 6.NR.1.1 | Fluently add and subtract any combination of fractions to solve problems. | 20.1-20.4, Skills Practice Stage 28, Weekly Challenge Wk; 7, 25, | Visual models moving to symbolic notation used to apply strategies to solve addition and subtraction with fraction problems. Missing result and missing change problems included also in word problem format. |
| 6.NR.1.2 | Multiply and divide any combination of whole numbers, fractions, and mixed numbers using a student-selected strategy. Interpret products and quotients of fractions and solve word problems. | 23.1-23.3, Skills Practice Stage 28.2, 28.3 | Use models and numbers to reason and solve multiplication and division fraction problems, including word problems. |
| 6.NR.1.3 | Perform operations with multi-digit decimal numbers fluently using models and student-selected strategies. | 24.1-24.3, 25.1, 25.2, 26.1-26.4, Skills Practice Stage 27 | Use models and numbers to reason and solve operations with multi-digit decimal numbers. Use part-whole and place value strategies to compute problems. |
| 6.NR.2.1 | Describe and interpret the center of the distribution by the equal share value (mean). | Skills Practice Stage 36 | Use data distributions to find measures of center and other information. |
| 6.NR.2.2 | Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distribution of quantitative (numerical) data in plots on a number line including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs. | Skills Practice Stage 36 | Interpret different measures of center and other data information on a variety of graphs. |
| 6.NR.2.3 | Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape. | Skills Practice Stage 36 | Find and determine quantitative distributions including median, mean, variability, range, and overall shape. |
| 6.NR.3.1 | Identify and compare integers and explain the meaning of zero based on multiple authentic situations. | Skills Practice Stage 32 | Reason about and explain that positive and negative numbers are used to describe quantities having opposite directions or values. Understand the meaning of zero. |
| 6.NR.3.2 | Order and plot integers on a number line and use distance from zero to discover the connection between integers and their opposites. | Skills Practice Stage 32 | Use visual models to recognize and understand that $-a$ is the same distance from zero as a , and therefore opposites of each other. |
| 6.NR.3.3 | Recognize and explain that opposite signs of integers indicate locations on opposite sides of zero on the number line; recognize and explain that the opposite of the opposite of a number is the number itself. | Skills Practice Stage 32 | Use visual models to show and explain why $-(-a) = a$. |
| 6.NR.3.4 | Write, interpret, and explain statements or order for rational numbers in authentic, mathematical situations. Compare rational numbers, including integers, using equality and inequality symbols. | Skills Practice Stage 32 | Be able to recognize and interpret numerical statements of inequality. |
| 6.NR.3.5 | Explain the absolute value of a rational number as its distance from zero on the number line; interpret absolute value as distance for a positive or negative quantity in a relevant situation. | Skills Practice Stage 32 | Recognize and evaluate absolute value, understand its distance from zero as always a positive a value. |
| 6.NR.3.6 | Distinguish comparisons of absolute value from statements about order. | Skills Practice Stage 32 | Recognize that i.e. -20 dollars is a debt of 20 dollars. |
| 6.NR.4.1 | Explain the concept of ratio, represent ratios, and use ratio language to describe a relationship between two quantities. | Skills Practice Stage 34 | Students use ratio language to describe a ratio relationship between two quantities. |
| 6.NR.4.2 | Make tables of equivalent ratios relating quantities with whole-number measurement, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. | Skills Practice Stage 32, 34 | Students find missing values of equivalent ratios using tables to compare them. Points are plotted on coordinate grids. |
| 6.NR.4.3 | Solve problems involving proportions using a variety of student-selected strategies. | Skills Practice Stage 34 | Students use different strategies to solve ratio and proportion problems. |
| 6.NR.4.4 | Describe the concept of rates and unit rate in the context of a ratio relationship. | Skills Practice Stage 34 | Students solve rate and unit rate problems in a variety of settings. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|--|--------------------------|--|
| Standard | Description | Stage References | Concepts |
| 6.NR.4.5 | Solve unit rate problems including those involving unit pricing and constant speed. | Skills Practice Stage 34 | Students solve problems involving constant speed and unit pricing in a variety of word problems. |
| 6.NR.4.6 | Calculate a percent of a quantity as a rate per 100 and solve everyday problems given a percent. | Skills Practice Stage 34 | Calculate the percentage of a number using proportional reasoning. Understand the concept of percentage and its connection with fractions and decimal numbers. |
| 6.NR.4.7 | Use ratios to convert within measurement systems to solve authentic problems that exist in everyday life. | Skills Practice Stage 34 | Solve word problems involving conversions between measurement systems, both customary and metric. |
| 6.GSR.5.1 | Explore area as a measurable attribute of triangles, quadrilaterals, and other polygons conceptually by composing or decomposing into rectangles, triangles, and other shapes. Find the area of these geometric figures to solve problems. | Skills Practice Stage 35 | Use knowledge about rectangular area to compose and decompose shapes into triangles and other shapes. |
| 6.GSR.5.2 | Given the net of three-dimensional figures with rectangular and triangular faces, determine the surface area of these figures. | Skills Practice Stage 35 | Understand the relationship between nets of 3-D shapes and their resulting shapes; find the surface area of such figures. |
| 6.GSR.5.3 | Calculate the volume of right rectangular prisms with fractional edge lengths by applying the formula, $V = (\text{area of base}) \times (\text{height})$. | Skills Practice Stage 35 | Apply the connection between length \times width to understand how to find the volume of right rectangular prisms, with fraction and whole numbers. |
| 6.PAR.6.1 | Write and evaluate numerical expressions involving rational bases and whole-number exponents. | Skills Practice Stage 33 | Interpret and evaluate numerical expressions. |
| 6.PAR.6.2 | Determine greatest common factors and least common multiples using a variety of strategies to make sense of applicable problems. | Skills Practice Stage 32 | Use different strategies, including the distributive property, to evaluate situations involving GCF and LCM. |
| 6.PAR.6.3 | Write and read expressions that represent operations with numbers and variables in realistic situations. | Skills Practice Stage 33 | Evaluate expressions with an understanding of terms like coefficient and constant, and interpret the role of variables. |
| 6.PAR.6.4 | Evaluate expressions when given values for the variables, including expressions that arise in everyday situations. | Skills Practice Stage 33 | Evaluate algebraic expressions with given variables and using the order of operations. |
| 6.PAR.6.5 | Apply the properties of operations to identify and generate equivalent expressions. | Skills Practice Stage 33 | Apply the distributive property to expressions and make equivalent expressions. |
| 6.PAR.7.1 | Solve one-step equations and inequalities involving variables when values for the variable are given. Determine whether an equation and inequality involving a variable is true or false for a given value of the variable. | Skills Practice Stage 33 | Use algebraic reasoning to solve equations and inequalities; determine whether a given number makes an equation or inequality true. |
| 6.PAR.7.2 | Write one-step equations and inequalities to represent and solve problems; explain that a variable can represent an unknown number or any number in a specified set. | Skills Practice Stage 33 | Solve problems involving positive variables and rational numbers. |
| 6.PAR.7.3 | Solve problems by writing and solving equations of the form $x + p = q$, $px = q$ and $x/p = q$ for cases in which p , q and x are all nonnegative rational numbers. | Skills Practice Stage 33 | Use models and strategies based on place value and properties of operations to solve one-step equations. |
| 6.PAR.7.4 | 4 Recognize and generate inequalities of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$ to explain situations that have infinitely many solutions; represent solutions of such inequalities on a number line. | Skills Practice Stage 33 | Use practical, mathematical situations corresponding to specific inequalities. |
| 6.PAR.8.1 | Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane. | Skills Practice Stage 32 | Extend knowledge of number lines and coordinate axes and plot points in all four quadrants of the coordinate plane. |
| 6.PAR.8.2 | Show and explain that signs of numbers in ordered pairs indicate locations in quadrants of the coordinate plane and determine how two ordered pairs may differ based only on the signs. | Skills Practice Stage 32 | Reason and interpret points in all four quadrants based on the signs. Explain the relationship between ordered pairs in location on the coordinate plane. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|--|--------------------------|---|
| Standard | Description | Stage References | Concepts |
| 6.PAR.8.3 | Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same x-coordinate or the same y-coordinate. | Skills Practice Stage 32 | Solve problems when graphing points. |
| 6.PAR.8.4 | Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same x-coordinate or the same y-coordinate. | Skills Practice Stage 32 | Solve problems with polygons when given coordinate pairs. |
| 7.NR.1.1 | Show that a number and its opposite have a sum of 0 (are additive inverses). Describe situations in which opposite quantities combine to make 0. | Skills Practice Stage 37 | Solve problems and understand that i.e. $4 + (-4) = 0$ and 4 and (-4) are additive inverses of each other. |
| 7.NR.1.2 | Show and explain $p + q$ as the number located a distance $ q $ from p , in the positive or negative direction, depending on whether q is positive or negative. Interpret sums of rational numbers by describing applicable situations. | Skills Practice Stage 37 | Add and subtract integers and other rational numbers, use of a number line for operations. |
| 7.NR.1.3 | Represent addition and subtraction with rational numbers on a horizontal or vertical number line diagram to solve authentic problems. | Skills Practice Stage 37 | Add and subtract integers and other rational numbers, using a vertical or horizontal number line. |
| 7.NR.1.4 | Show and explain subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference and apply this principle in contextual situations. | Skills Practice Stage 37 | Solve mathematical and situational problems involving the subtraction of rational numbers. |
| 7.NR.1.5 | Apply properties of operations, including part-whole reasoning, as strategies to add and subtract rational numbers. | Skills Practice Stage 37 | Situational problems allow students to explore and solve problems with signed integers. |
| 7.NR.1.6 | Make sense of multiplication of rational numbers using realistic applications. | Skills Practice Stage 37 | Understand that $-2/3 \times -20 = 2/3 \times 20$ and solve similar problems. |
| 7.NR.1.7 | Show and explain that integers can be divided, assuming the divisor is not zero, and every quotient of integers is a rational number. | Skills Practice Stage 37 | Practice and solve division problems with signed integers and fractions. |
| 7.NR.1.9 | Apply properties of operations as strategies to solve multiplication and division problems involving rational numbers represented in an applicable scenario. | Skills Practice Stage 37 | Combine rational numbers in a variety of ways. |
| 7.NR.1.11 | Solve multi-step, contextual problems involving rational numbers, converting between forms as appropriate, and assessing the reasonableness of answers using mental computation and estimation strategies. | Skills Practice Stage 37 | Solve contextual problems involving decimals, fractions, and integers. |
| 7.PAR.2.1 | Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. | Skills Practice Stage 38 | Write equivalent expressions to those given. |
| 7.PAR.2.2 | Rewrite an expression in different forms from a contextual problem to clarify the problem and show how the quantities in it are related. | Skills Practice Stage 38 | Rewrite contextual problems with simplified expressions which shed light on such problems. |
| 7.PAR.3.1 | Construct algebraic equations to solve practical problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Interpret the solution based on the situation. | Skills Practice Stage 38 | Represent relationships in mathematical situations with equations involving variables and positive and negative rational numbers using properties of equality to solve for variables. |
| 7.PAR.3.2 | Construct algebraic inequalities to solve problems, leading to inequalities of the form $px \pm q > r$, $px + q < r$, $px + q \leq r$, or $px + q \geq r$, where p , q , and r are specific rational numbers. Graph and interpret the solution based on the realistic situation that the inequalities represent. | Skills Practice Stage 38 | Solve inequalities; interpret the solution of an inequality used to explain real phenomena. |
| 7.PAR.4.1 | Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units presented in realistic problems. | Skills Practice Stage 39 | Solve problems involving unit rates in everyday circumstances. |
| 7.PAR.4.2 | Determine the unit rate (constant of proportionality) in tables, graphs (1, r), equations, diagrams, and verbal descriptions of proportional relationships to solve realistic problems. | Skills Practice Stage 39 | Understand unit rate and constant of proportionality as the same. |

| Georgia Performance Standards - Mathematics | | Symphony Math | |
|---|---|--------------------------|--|
| Standard | Description | Stage References | Concepts |
| 7.PAR.4.3 | Determine whether two quantities presented in authentic problems are in a proportional relationship. | Skills Practice Stage 39 | Analyze relationships using proportional reasoning strategies, including graphing on a coordinate plane. |
| 7.PAR.4.4 | Identify, represent, and use proportional relationships. | Skills Practice Stage 39 | Analyze and identify proportional relationships between quantities using verbal descriptions, tables, equations, and graphs. |
| 7.PAR.4.9 | Use proportional relationships to solve multi-step ratio and percent problems presented in applicable situations. | Skills Practice Stage 39 | Solve problems with taxes, markups and markdowns, gratuities, and simple interest. |
| 7.PAR.4.10 | Predict characteristics of a population by examining the characteristics of a representative sample. Recognize the potential limitations and scope of the sample to the population. | Skills Practice Stage 41 | Identify strategies for gathering data to determine how sample was selected or question asked. |
| 7.PAR.4.11 | Analyze sampling methods and conclude that random sampling produces and supports valid inferences. | Skills Practice Stage 41 | Choose sampling techniques and conclude if conditions are biased, random, or not representative. |
| 7.PAR.4.12 | Use data from repeated random samples to evaluate how much a sample mean is expected to vary from a population mean. Simulate multiple samples of the same size. | Skills Practice Stage 41 | Draw inferences on measures of central tendency using sample data. |
| 7.GSR.5.3 | Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve equations for an unknown angle in a figure. | Skills Practice Stage 40 | Understand and use angle vocabulary terms, use angle relationships to solve equations with unknown angles. |
| 7.GSR.5.4 | Explore and describe the relationship between pi, radius, diameter, circumference, and area of a circle to derive the formulas for the circumference and area of a circle. | Skills Practice Stage 40 | Use proportional reasoning to explain the relationship between a circle diameter and circumference and derive the formula for circle area. |
| 7.GSR.5.5 | Given the formula for the area and circumference of a circle, solve problems that exist in everyday life. | Skills Practice Stage 40 | Apply the formula for circle measures in mathematical and everyday problems. |
| 7.PR.6.1 | Represent the probability of a chance event as a number between 0 and 1 that expresses the likelihood of the event occurring. Describe that a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. | Skills Practice Stage 41 | Represent probability as a fraction or percentage; use words including impossible, unlikely, equally likely, likely, and certain. |
| 7.PR.6.2 | Approximate the probability of a chance event by collecting data on an event and observing its long-run relative frequency will approach the theoretical probability. | Skills Practice Stage 41 | Predict approximate or relative frequency given theoretical probability. |