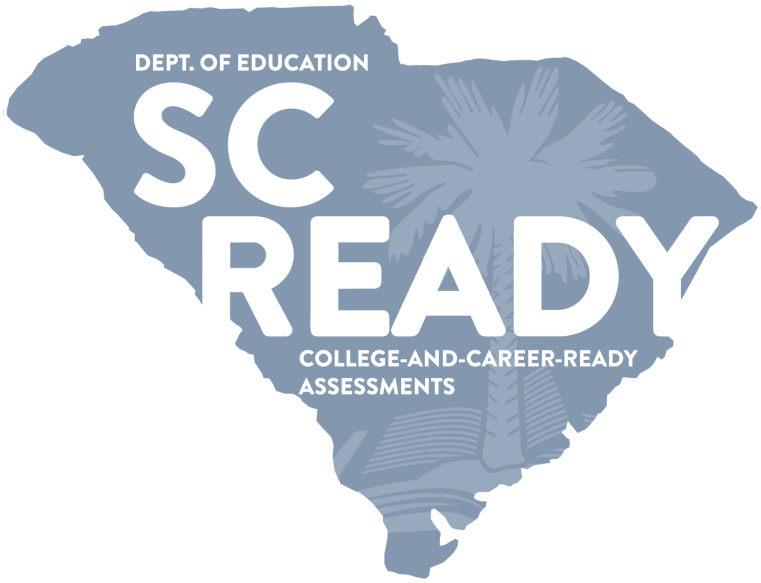
SOUTH CAROLINA
DEPARTMENT OF EDUCATION



Mathematics Assessment Specifications for Teachers
3rd Grade

Office of Assessment and Standards

Updated August 2025

South Carolina Department of Education

Contents

Introduction

The SC READY Mathematics Assessment Specifications for Teachers is based upon the development of the South Carolina College- and Career-Ready Assessments (SC READY) that measures the 2025 South Carolina College- and Career-Ready (SC CCR) Mathematics Standards. The assessment specifications provide important information regarding the content to be measured. The assessment specifications also serve as a road map to guide South Carolina educators in the development and subsequent review of items that best measure the 2025 SC CCR Math Standards for a given grade-level. These documents are intended as a guide for item developers working in and with the Office of Assessment and Standards and not as a curriculum or instructional guide. The information found within these documents reflects the content limits and the foundational knowledge targets addressed by the state assessment. *Please note: This document is reviewed and updated annually to ensure alignment with current standards and assessment practices*.

Each item specification is aligned to the given strand, standard, and grade-level indicator, and includes the following key information:

- Example Tasks
- Assessment Guidelines
- Webb's Depth of Knowledge (DOK) or cognitive level(s)
- Item types

Assessment Specifications Descriptions

Strands: This document is divided into four major strands: Data, Probability, and Statistical Reasoning (DPSR); Measurement, Geometry, and Spatial Reasoning (MGSR); Numerical Reasoning (NR); and Patterns, Algebra, and Functional Reasoning (PAFR).

Standards and Indicators: According to the *Procedures for Cyclical Review of South Carolina Academic Standards*, "academic standards are statements of the most important, consensually determined expectations for student learning in a particular discipline. Each of the newly revised South Carolina standards statements will be supported by specific instructional objectives called indicators" (Barton & Spearman, 2016).

Each standard contains one or more vertically articulated grade-level indicators. The grade-level indicators set the end-of-year learning expectation.

***Math Vocabulary for Assessment*:** The words included are academic terms related to the assessment. It is important to note that the Math Vocabulary for Assessment is not an exhaustive list. The lists are not intended to be used by educators for memorization purposes in the classroom.

Indicator Insights: Indicator Insights provide an understanding of the indicator for the classroom teacher. These insights provide teachers with clarifying information about the expectations and/or the content of the indicator. Some insights may provide connections to indicators in other standards or strands.

Example Tasks: The intent of this section is to describe examples of how the attached indicator may be assessed. The example tasks are not an exhaustive list.

Assessment Guidelines: Parameters that define the learning expectations. These guidelines provide a measurable framework for assessing student's knowledge, skills, and abilities, however, classroom work should extend beyond these limits. Prior knowledge such as key words/terms, phrases, classifications, etc., from previous grade level standards is an expectation and may be assessed in test items.

Depth of Knowledge (DOK): Depth of knowledge involves the cognitive complexity, or the nature of thinking, required for a given item. Webb's DOK levels are used in the development of items to assess cognitive demand. Therefore, when developing items with DOK in mind, each item should be as demanding cognitively as what the actual standard describes. Webb's DOK includes four levels, arranged from low (basic recall) to high (extended thinking). Each item in the Mathematics SC READY assessment is written to one of the following three levels of cognitive complexity:

- Level 1: Recall
- Level 2: Application of a Skill/Concept
- Level 3: Strategic Thinking

Item Types: The SC READY assessments are composed of various item types

- **Selected-Response (SR) Items:** SR items have four answer choices, including distractors and one correct answer. Distractors for mathematics represent common misconceptions, incorrect logic, or incorrect understanding of a text, etc. A correct response to an SR item is worth one score point in the Mathematics SC READY assessment.
- **Multi-Select (MS) Items**: MS Items have 5-6 possible answers options. Students demonstrate their knowledge by selecting the two correct answers. MS items are worth one score point.
- **Technology-Enhanced (TE) Items:** TE items (new for Grades 3-5) share the same functional structure as traditional test items. All items are worth one score point. TE items include, but are not limited to, the following:

Type of Item	Description
Drag and Drop Input	Students click on selectable objects and sort them into groups, steps, or other arrangements to demonstrate their knowledge. Some examples of selectable objects include single numerical values, numerical expressions or equations, graphs, statements, operational signs, geometric figures, and tables.
Drop-Down Input	Students are expected to select their response from a drop-down list or drop-down menu.
Hot Spot	Students interact with selectable objects to demonstrate their knowledge, skills, and abilities to answer a question. Selectable objects include whole or parts of figures, graphs, tables, verbal descriptions, or symbolic representations.
Matching	Students demonstrate their knowledge by connecting a line from each response in a set of graphics on the left side of the screen to a response in a set of graphics on the right side of the screen.
Match Interaction Table	Students are presented with a matrix consisting of mathematical or English statements across the columns and rows. Students demonstrate their knowledge by selecting one or more correct answers per row to associate correct statements in the matrix.

- **Technology-Enhanced (TE) Constructed-Response Items**: TE Constructed-Response items (new for Grades 3-5) require students to construct their own response, rather than selecting from predetermined options. All items are worth one score point. TE Constructed-Response items include, but are not limited to, the following:

Type of Item	Description
Keypad Input	Students are presented with an item. The student is asked to respond by writing their numerical answer or writing a mathematical expression or equation to answer the item.
Bar Graph Input	Students are presented with an item. The students demonstrate their knowledge by selecting the height of each bar to create a bar graph.
Clock	Students are presented with an item that includes a clock missing the minute and hour hands. The student is expected to respond by selecting the correct locations of the hour hand and minute hand on an analog clock face.
Dot Plot Input	The student is presented with a line graph. The student is expected to respond by plotting data points to create a correct dot plot.

Calculator

Calculators will not be used in Grades 3-5 for SC READY Math.

Editorial Suggestions

If you have editorial suggestions for annual edits on this document, please complete our form: Mathematics Assessment Specifications for Teachers Editorial Suggestions located on our Assessment Quick Links for Teachers page, or scan the QR code.

Acknowledgment

SCDE OAS would like to thank the South Carolina teachers and content specialists who have served on our various assessment committees. Without your expertise and input, this resource would not have been possible.

Data, Probability, and Statistical Reasoning (DPSR)

Standard 3.DPSR.1

Collect and analyze data and communicate through multiple representations.

Math Vocabulary for Assessment: Bar graph, categorical data, dot plot, numerical data, picture graph, scale, survey, and table.

Indicator	**3.DPSR.1.1** Collect and organize categorical and numerical data based on observations, surveys, experiments, and investigations with whole number values using tables, scaled picture graphs, scaled bar graphs, or dot plots. Use titles and labels. Limit scales to multiples of 1, 2, 5, and 10.
Indicator Insight	Categorical data can be represented using bar graphs and picture graphs that are displayed horizontally or vertically. Numerical data can be represented using dot plots and bar graphs. Connect to science and social studies content. Connect to science and social studies content.
3.DPSR.1.1	**Assessment Specifications**
Example Tasks	The student will be able to • create data displays based on categorical or numerical data. • determine the scale used for a scaled bar graph or picture graph based on the data provided.
Assessment Guidelines	SC READY items will focus on data displays using whole number values and scales based on multiples of 1, 2, 5, or 10. Students will work with tables, scaled picture graphs, scaled bar graphs, and dot plots. For summative assessments, it is okay for categorical data to be shown in a dot plot.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.DPSR.1.2** Solve one-step, real-world situations using whole number data represented in tables, scaled picture graphs, scaled bar graphs, or dot plots. Limit scales to multiples of 1, 2, 5, and 10.
Indicator Insight	Do not use data with outliers.
3.DPSR.1.2 Assessment Specifications	
Example Tasks	The student will be able to • solve one-step, real-world situations using data shown in a data display.
Assessment Guidelines	SC READY items will focus on data displays that use whole number values with scales based on multiples of 1, 2, 5, or 10. Students will work with tables, scaled picture graphs, scaled bar graphs, and dot plots. When solving problems, students will only use addition and subtraction. For summative assessments, it is okay for categorical data to be shown in a dot plot.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 3.DPSR.2

Represent the probability of simple events and determine possible outcomes.

Math Vocabulary for Assessment: outcome, possible, probability, and simple event.

Indicator	**3.DPSR.2.1** Identify the possible outcomes of a simple event.
Indicator Insight	Example: When rolling a die, the possible outcomes are 1, 2, 3, 4, 5, or 6. Rolling a 9 is not a possible outcome. This is the first time that probability is introduced as a simple event. A simple event could include, but is not limited to, spinning a spinner, tossing a die, drawing one card, or flipping a coin.
Assessment Specifications	
Example Tasks	The student will be able to • determine possible outcomes for a simple event. • determine outcomes that are not possible for a simple event.
Assessment Guidelines	Students will work with different types of spinners that may include colors, pictures, or numbers. When students list possible outcomes, remind them not to include repeated colors, pictures, or numbers. They should only list each outcome once. • *Example:* Imagine a deck of cards with the numbers: 1, 1, 5, 10, 10, 15, 20, and 20. Students should only write down each number once, so the outcomes they list, in any order, would be: 1, 5, 10, 15, and 20. Students are not expected to know the term "sample space." Students are not expected to find probabilities. Just list outcomes. For summative assessment purposes, the term fair number cube will be used instead of "die" (singular form of dice).
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Measurement, Geometry, and Spatial Reasoning (MGSR)

Standard 3.MGSR.1

Solve area and perimeter problems in real-world and mathematical situations.

Math Vocabulary for Assessment: area, perimeter, square unit(s), and unit(s).

Indicator	**3.MGSR.1.1** Determine the area of squares and rectangles presented in relevant problems by covering the space with square units and counting the total number of units needed.
Indicator Insight	Explore area as an attribute that involves the covering of two-dimensional space. When tiling, there should be no gaps or overlaps. Provide opportunities for students to use square tiles, grid paper, and/or dot paper. Use square units to label area measurements. To make connections to multiplication, it is important for students to discover the relationship between the lengths of the two sides of the rectangle and the area.
3.MGSR.1.1	**Assessment Specifications**
Example Tasks	The student will be able to • find area by tiling a rectangle. • appropriately label area.
Assessment Guidelines	Students are expected to see examples where they need to create the tiling or finish the tiling of a figure. Students are not expected to use a multiplication equation to find area. Students are not expected to see composite figures, as well as use exponential notation (un^2). Students should be familiar with the abbreviation for square units (sq. units).
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.MGSR.1.2** Determine the perimeter of regular and irregular triangles and quadrilaterals with known side lengths.
Indicator Insight	Explore perimeter as the length/distance around the sides of a two-dimensional shape. Provide exposure to finding the perimeter of other polygons, but the emphasis should be on regular and irregular triangles and quadrilaterals. Composite figures are not an expectation.
3.MGSR.1.2	**Assessment Specifications**
Example Tasks	The student will be able to • solve problems involving perimeter.
Assessment Guidelines	SC READY items will focus on perimeter of regular triangles, irregular triangles, and all quadrilaterals. Students are not expected to find the perimeter of a composite figure. Students should recognize the opposite sides of a rectangle or square are equal in length. Students are not expected to find the length of a missing side.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.MGSR.1.3** Determine if a real-world situation is an example of the need for finding the area or the perimeter of a figure.
Indicator Insight	Understand the difference between a measure of length (perimeter) and a measure of covering space (area). Students would not be expected to solve for perimeter or area for this indicator
3.MGSR.1.3 Assessment Specifications	
Example Tasks	The student will be able to • determine whether area or perimeter is needed in a real-world situation.
Assessment Guidelines	SC READY items will focus on perimeter of regular triangles, irregular triangles, and all quadrilaterals, as well as area of rectangles. Expose students to a variety of real-world situations, beyond fencing, flooring, and gardens. Students are not expected to make a calculation on this indicator just determine which is appropriate for the situation. Students are not expected to work with composite figures.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 3.MGSR.2

Estimate and measure using units of length, liquid volume, currency, and intervals of time.

Math Vocabulary for Assessment: AM, analog, centimeter(s), coin(s), cup(s), digital, dime(s), dollar(s), elapsed time, end time, estimate, fluid ounce(s), gallon(s), half inch, inch(es), liter(s), liquid volume, milliliter(s), nickel(s), penny(-ies), pint(s), PM, quart(s), quarter(s), start time, units of measure, and value.

Indicator	**3.MGSR.2.1** Determine the value of any collection of coins, not to exceed $5. Write the amount in the form of dollars and cents using the decimal notation. Limit to penny, nickel, dime, and quarter.
Indicator Insight	Provide experiences with collections with front and back sides of coins.
3.MGSR.2.1 Assessment Specifications	
Example Tasks	The student will be able to • determine the value of a collection of coins from a verbal description • determine the value of a collection of coins from a pictorial representation
Assessment Guidelines	Students are expected to be familiar with the fronts and backs of coins, particularly in black and white. SC READY items will focus on penny, nickel, dime, and quarter. The value of the coins should not exceed $5.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.MGSR.2.2** Use analog and digital clocks to tell and record time to 1-minute intervals, identifying AM and PM.
Indicator Insight	In second grade, students used analog and digital clocks to tell and record time to 5-minute intervals.
3.MGSR.2.2	**Assessment Specifications**
Example Tasks	The student will be able to • determine what time is showing on an analog or digital clock. • create a clock to match a specific time. • Identify whether AM or PM is the appropriate label given a context
Assessment Guidelines	Students should recognize different ways to write AM and PM (like AM, A.M., am, a.m. and PM, P.M., pm, p.m.), but they do not need to know the full terms *ante meridiem* or *post meridiem*. Students are not expected to calculate elapsed time. SC READY items will focus on reading time to the nearest minute. Reading to the nearest 5 minutes is considered below grade level at this point.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.MGSR.2.3** Solve problems involving addition and subtraction of time intervals to determine elapsed time to the nearest half hour.
Indicator Insight	Use a number line to represent adding or subtracting hours and/or half hours. The expectation is not to add or subtract times that cross noon or midnight. Start times should begin on the hour or half hour.
3.MGSR.2.3	**Assessment Specifications**
Example Tasks	The student will be able to • determine the elapsed time given a start and end time. • determine the end time given a start time and an amount of elapsed time.
Assessment Guidelines	Students should recognize different ways to write AM and PM (like AM, A.M., am, a.m. and PM, P.M., pm, p.m.), but they do not need to know the full terms *ante meridiem* or *post meridiem*. When assessing time, stick to start times on the hour or half hour. End times can stop at any point on the clock, and students estimate to the nearest half hour. Elapsed time problems should stay within the same part of the day—no crossing over noon or midnight.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.MGSR.2.4** Estimate and measure length/distance to the nearest half inch and nearest whole centimeter.
Indicator Insight	Connect the ruler to the number line. Centimeter is the first mention of the metric system.
3.MGSR.2.4	**Assessment Specifications**
Example Tasks	The student will be able to • place a ruler appropriately. • use a ruler to measure to the nearest half inch or the nearest whole centimeter. • estimate a measurement to the nearest half inch or nearest whole centimeter.
Assessment Guidelines	Students are expected to be familiar with mixed numbers. Students are expected to be able to measure objects oriented in any direction, as well as recognize the measurement of an object when the ruler begins at a place other than zero. Students are expected to be familiar with the abbreviations for each measurement: in. – inches; cm. – centimeters.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.MGSR.2.5** Determine which unit of liquid volume is most appropriate to measure in real-world situations. Limit to fluid ounces, cups, pints, quarts, gallons, milliliters, and liters.
Indicator Insight	Show containers that will represent each of the measures. Work within one system of measurement at a time.
3.MGSR.2.5	**Assessment Specifications**
Example Tasks	The student will be able to • select the appropriate unit to measure liquid volume in real-world situations.
Assessment Guidelines	SC READY items will focus on units of fluid ounces, cups, pints, quarts, gallons, milliliters, and liters. Limit to one system at a time. Students will be expected to use the embedded online ruler found on the Online Tutorial Training (OTT) from the DRC Insight Assessment platform. Students are expected to be familiar with the abbreviations for each measurement: fl. oz. – fluid ounces; c. – cup; pt. – pint; qt. – quart; gal. – gallon; ml. – milliliter; l – liter. Excludes conversions.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 3.MGSR.3

Extend geometric reasoning to attributes of polygons and/or polyhedrons.

Math Vocabulary for Assessment: acute angle, intersecting lines, line segment, line, obtuse angle, parallel lines, perpendicular lines, point, quadrilateral, ray, right angle, straight angle, and triangle.

Indicator	**3.MGSR.3.1** Describe and draw right, acute, obtuse, and straight angles. Identify these angle types in two-dimensional figures including triangles and quadrilaterals.
Indicator Insight	Recognize angles as attributes of geometric shapes formed when two rays share a common endpoint and create a space between the rays. An acute angle has rays that are closer together. An obtuse angle has rays that are farther apart. Use everyday objects with a square corner (such as index cards, sticky notes, notebook paper) as a reference or benchmark for a right angle. Use the straight edge of a sheet of paper as a benchmark for a straight angle. The expectation is not to measure angles with a protractor.
3.MGSR.3.1	**Assessment Specifications**
Example Tasks	The student will be able to • describe the characteristics of a specified type of angle. • draw a specified type of angle. • identify a specified type of angle in two-dimensional shapes.
Assessment Guidelines	Students should know and use the terms acute, obtuse, right, and straight angle. Encourage students to use a right angle as a benchmark when comparing angles, and to use everyday tools—like the corner of a piece of paper—to help estimate angles they see on assessments. Students are not expected to measure angles with a protractor or know exact angle measurements.
DOK(s)	1, 2
Item Types	Selected-Response Multi-Select Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.MGSR.3.2** Identify, describe, and draw points, lines, line segments, rays, intersecting lines, perpendicular lines, and parallel lines. Identify these in two-dimensional figures.
Indicator Insight	Clarify lines versus line segments in two-dimensional figures. Figures are not limited to polygons. A trapezoid is defined as a quadrilateral with exactly one pair of parallel sides.
3.MGSR.3.2	**Assessment Specifications**
Example Tasks	The student will be able to • describe the characteristics of points, rays and specific types of lines. • draw points, rays and specific types of lines. • identify points, rays and specific types of lines in two-dimensional shapes from both verbal descriptions and figures
Assessment Guidelines	Students should understand basic geometry terms like points, lines, line segments, rays, intersecting lines, parallel lines, and perpendicular lines. Students should define a trapezoid as a quadrilateral with exactly one pair of parallel sides.
DOK(s)	1, 2
Item Types	Selected-Response Multi-Select Technology-Enhanced Technology-Enhanced Constructed-Response

Numerical Reasoning

Standard 3.NR.1

Represent and compare numbers using relationships within the base ten number system.

Math Vocabulary for Assessment: Base ten, benchmark, compare, compose, decompose, digit, equation, expanded form, expression, hundred(s), hundred-thousand(s), is equal to (=), is greater than (>), is less than (<), model, number line, one(s), period, place value, round, standard form, ten(s), ten-thousand(s), thousand(s), whole, and word form.

Indicator	**3.NR.1.1** Read, write, and represent whole numbers through the thousands period (0 to 999,999) on a number line and in standard form, base ten language, word, and equations in expanded form.
Indicator Insight	Use a scaled number line and have students position numbers. Base ten language refers to identifying the number of hundred thousands, ten thousands, thousands, hundreds, tens, and ones in a numeral (ex: 6 hundred thousands, 4 ten thousands, 7 thousands, 2 hundreds, 9 tens, 5 ones). Number lines should not be limited to starting at 0 and should include different ranges such as 1,000–5,000.
3.NR.1.1	**Assessment Specifications**
Example Tasks	The student will be able to • read and write numbers in standard, base ten language or expanded form. • convert from one form of a number to another form between standard, base ten language and expanded form. • represent a number on a number line.
Assessment Guidelines	Students are expected to know the ones and thousands periods. Students are expected to be exposed to expanded form where the equation is not in ascending or descending order. SC READY items will focus on whole numbers from 0 to 999,999.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.1.2** Compose and decompose 4-digit whole numbers in multiple ways using thousands, hundreds, tens, and ones.
Indicator Insight	Explain and demonstrate each composition or decomposition with the use of concrete objects, drawings, expressions, and equations.
3.NR.1.2	**Assessment Specifications**
Example Tasks	The student will be able to • compose whole numbers into thousands, hundreds, tens, and ones. • recognize equivalent decomposition of whole numbers into thousands, hundreds, tens, and ones.
Assessment Guidelines	SC READY items will give students chances to break apart 4-digit numbers in both expanded form and using flexible combinations that still equal the same value. For example: • Expanded form: 1,000 + 400 + 80 + 2 = 1,482 • Flexible combinations: 1,000 + 200 + 200 + 80 + 2 *or* 14 hundreds, 8 tens, 2 ones Students are expected to be exposed to expanded form and flexible combinations where the equation is not in ascending or descending order. The goal is for students to see that numbers can be composed and decomposed in different, and equivalent ways.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.1.3** Compare two whole numbers up to 999,999 based on the place value of the digits using the symbols for is equal to (=), is less than (<), or is greater than (>).
Indicator Insight	Compare the quantities using place value.
Assessment Specifications	
Example Tasks	The student will be able to • write a comparison statement using <, =, >.
Assessment Guidelines	Students should understand what the comparison symbols mean, not just write them in a number sentence. SC READY items will focus on comparing two whole numbers less than or equal to 999,999. Students are not expected to order numbers.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.1.4** Round whole numbers from 0 to 1,000 to the nearest 10 or 100.
Indicator Insight	Use both vertical and horizontal number lines and place benchmark numbers and midpoint numbers. Doing so allows students to conceptually understand to which multiple of 10 or multiple of 100 a number rounds. Use the convention that if there is a 5 in the ones or tens place, the number is rounded to the next 10 or 100, depending on the unit requested, rather than rhymes and tricks.
3.NR.1.4	**Assessment Specifications**
Example Tasks	The student will be able to • round a number to the nearest ten or hundred. • determine which number would round to a specific number.
Assessment Guidelines	SC READY items will focus on whole numbers from 0 to 1,000. Students can simply round a number or determine a number that would round to a given rounded number.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 3.NR.2

Represent and compare fractions in multiple ways using part-whole relationships.

Math Vocabulary for Assessment: area model, compare, compose, denominator, equivalent, fraction, fractions greater than one (improper fraction), linear model, mixed number, model, numerator, part, partition, unit fraction, whole, and word form.

Indicator	**3.NR.2.1** Identify unit fractions as the quantity formed by one part when a whole is partitioned into 2, 3, 4, 6, or 8 equal-sized parts. Express each part as a unit fraction of the whole.
Indicator Insight	Provide opportunities to partition circles, equilateral triangles, squares, rectangles, hexagons, and octagons. Explore many ways to partition these shapes into equal sized parts. This indicator is the foundation for unit fractions being represented by visual representations. A fraction $\frac{a}{b}$ is the quantity formed by a part of size $\frac{1}{b}$. For example, $\frac{3}{4}$ is formed by three one-fourths.
3.NR.2.1	**Assessment Specifications**
Example Tasks	The student will be able to • recognize unit fractions as the quantity formed by one part when a whole is partitioned into equal-sized parts. • determine what unit fraction is represented by one part of a shape partitioned into equal-sized parts. • partition a shape to represent a particular unit fraction
Assessment Guidelines	SC READY items will focus on fractions with a denominator of 2, 3, 4, 6, or 8.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.2.2** Represent fractions from 0 to 1 using concrete, set, area, and linear models, and write them in standard form and word form. Limit denominators to 2, 3, 4, 6, and 8.
Indicator Insight	This is students' first experience with concrete, set, area, and linear models. Linear models could include number lines and fraction tiles. In second grade, students partitioned circles, squares, and rectangles into halves and fourths. This is also the first-time students have seen a fraction written as a number. Embed concrete and hands-on opportunities throughout the fraction unit. Continue to build student understanding of quantity and size of unit fractions when representing fractions between 0 and 1. This is also the first-time students have seen a fraction written as a number.
3.NR.2.2	**Assessment Specifications**
Example Tasks	The student will be able to • represent fractions using models. • write a fraction in standard or word form.
Assessment Guidelines	SC READY items will focus on fractions greater than 0 and less than 1, but with denominators of 2, 3, 4, 6, or 8.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.2.3** Express whole numbers as fractions and identify fractions that are equivalent to whole numbers. Limit denominators to 1, 2, 3, 4, 6, and 8.
Indicator Insight	Area and linear models should be used. Encourage students to find multiple fractions equivalent to the same whole number greater than or equal to 1.
3.NR.2.3	**Assessment Specifications**
Example Tasks	The student will be able to • create fraction models to represent whole numbers. • express a whole number as a fraction. • identify when a fraction represents a whole number.
Assessment Guidelines	SC READY items will focus on denominators of 1, 2, 3, 4, 6, or 8. Limit numerators to numbers less than 100.
DOK(s)	1, 2,
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.2.4** Compose fractions between the whole numbers 0 and 5 using unit fractions. Record the composition as a mixed number or fraction greater than 1. Limit denominators to 2, 3, 4, 6, and 8.
Indicator Insight	Use concrete, area, and linear models. Represent and interpret the fraction greater than 1 in the form of $\frac{a}{b}$ when the unit fraction $\frac{1}{b}$ is added *a* times. Provide experiences counting by a unit fraction beyond one whole. Provide opportunities to build the model and name the value both as a fraction greater than 1 and as a mixed number to notice the relationship between the two representations. Fractions greater than 1 are also referred to as improper fractions.
3.NR.2.4	**Assessment Specifications**
Example Tasks	The student will be able to • compose fractions using unit fractions.
Assessment Guidelines	Students are expected to develop an understanding of mixed numbers and fractions greater than one (improper fractions). SC READY items will focus on fractions between 0 and 5, as well as denominators of 2, 3, 4, 6, or 8.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.2.5** Recognize two fractions are equivalent. Limit denominators to 2, 3, 4, 6, and 8, and fractions should be limited to fractions between 0 and 1.
Indicator Insight	Use concrete, area, and linear models. Use visual fraction models (area) of the same whole to identify equivalencies. Corresponding number lines should represent equivalent fractions.
3.NR.2.5	**Assessment Specifications**
Example Tasks	The student will be able to • determine if two fractions are equivalent. • create equivalent fractions. • determine if two models represent equivalent fractions.
Assessment Guidelines	SC READY items will focus on fractions greater than 0 and less than 1, but with denominators of 2, 3, 4, 6, or 8.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.NR.2.6** Compare two fractions with the same numerator or same denominator based on the same size whole by reasoning about their size. Use the symbols for is equal to (=), is less than (<), or is greater than (>). Limit denominators to 2, 3, 4, 6, and 8, and fractions should be limited to fractions between 0 and 1.
Indicator Insight	Use concrete, area, and linear models. When referring to a fraction (numerator and denominator), avoid using language such as "top number," "bottom number," and "out of." Locate fractions on a number line to compare.
3.NR.2.6	**Assessment Specifications**
Example Tasks	The student will be able to • compare two fractions with the same numerator. • compare two fractions with the same denominator. • write a comparison statement using =, <, or >. • recognize the location of two fractions on a number line.
Assessment Guidelines	SC READY items will focus on fractions greater than 0 and less than 1, but with denominators of 2, 3, 4, 6, or 8.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Patterns, Algebra, and Functional Reasoning (PAFR)

Standard 3.PAFR.1

Use multiple representations to reason and solve problems involving operational properties of whole numbers.

Math Vocabulary for Assessment: addition, compute, difference, divide, dividend, divisor, equation, expression, factor, model, multiply, product, quotient, subtraction, and sum.

Indicator	**3.PAFR.1.1** Use a strategy to compute sums and differences up to 1,000.
Indicator Insight	This indicator is about building conceptual understanding, not about practicing a standard algorithm. Strategies should include using concrete models, open number lines, or drawings and strategies based on place value, properties of operations, partial sums, or the inverse relationship between addition and subtraction. Provide opportunities to select a strategy that best fits the problem.
3.PAFR.1.1	**Assessment Specifications**
Example Tasks	The student will be able to • find the sum. • find difference. • describe a strategy used to find sums or differences.
Assessment Guidelines	Students are expected to use strategies that are not the standard algorithm. SC READY items will focus on sums and minuends within 1,000.
DOK(s)	1, 2, 3
Item Types	Selected-Response Multi-Select Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.PAFR.1.2** Multiply whole numbers (factors 0–10) and divide whole numbers (divisors 1–10) using a model and write a corresponding equation.
3.PAFR.1.2	The purpose of this indicator is to build conceptual understanding of multiplication and division. To develop the relationship between multiplication and division, these concepts should be taught at the same time. When modeling multiplication, present the related division fact. Connect the equation to the model. When modeling division, present the related multiplication fact. Connect the equation to the model. Representations should include concrete models, equal groups, arrays (rows x columns), and linear models. When reading a multiplication equation, the multiplication symbol should be read as "groups of." This reinforces the meaning of multiplication. When models are shown, the convention is that 3 x 3 is three groups of three. It is also an array with three rows and three in each row. When using arrays, explore the Commutative Property for multiplication by rotating the model to discover that the product is still the same even though the order of the factors changed. Using the Commutative Property allows students to learn two facts simultaneously. Explore the Associative and Distributive Properties for multiplication and division. Ensure connections are made when decomposing arrays and concrete objects. Use parentheses as grouping symbols when recording the decomposition.
3.PAFR.1.2	**Assessment Specifications**
Example Tasks	The student will be able to • multiply whole numbers using models. • divide whole numbers using models. • write an equation to represent a multiplication or division problem.
Assessment Guidelines	SC READY items will focus on multiplication where the factors are whole numbers 0 through 10, and division where the divisors are limited to whole numbers 1 through 10.
DOK(s)	1, 2, 3
Item Types	Selected-Response Multi-Select Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.PAFR.1.3** Multiply two whole numbers from 0 to 10 and divide using related facts flexibly and accurately.
Indicator Insight	Decompose a factor or dividend/divisor into a fact students do know. Students may also use a known fact to determine the unknown fact. Both strategies can be done efficiently and accurately. Using visuals will help students develop flexibility. Use parentheses as grouping symbols. State a division problem as a missing factor problem.
3.PAFR.1.3	**Assessment Specifications**
Example Tasks	The student will be able to • multiply two whole numbers. • divide two numbers using related facts. • recognize fact families.
Assessment Guidelines	SC READY items will focus on multiplying numbers from 0 to 10 and dividing within those same limits.
DOK(s)	1, 2
Item Types	Selected-Response Multi-Select Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 3.PAFR.2

Use reasoning to represent and solve algebraic and numerical situations.

Math Vocabulary for Assessment: addition, compute, difference, divide, dividend, divisor, equation, expression, factor, multiple, multiply, numerical pattern, product, quotient, rule, sequence, subtraction, and sum.

Indicator	**3.PAFR.2.1** Determine the unknown whole number in a multiplication or division real-world situation relating three whole numbers when the unknown is a missing factor, product, dividend, divisor, or quotient.
Indicator Insight	The unknown can be represented by an open box, question mark, symbol, or a letter.
3.PAFR.2.1	**Assessment Specifications**
Example Tasks	The student will be able to • write an equation to match a real-world situation involving an unknown. • solve a real-world situation involving multiplication or division with an unknown.
Assessment Guidelines	SC READY items will focus on situations with 2 known numbers and 1 unknown number. Expose students to multiple representations for an unknown- open box, question mark, symbol, or a letter.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.PAFR.2.2** Solve one- and two-step real-world situations using addition and subtraction up to 1,000.
Indicator Insight	Represent the problem situation using an equation with a symbol for the unknown. Provide contexts that include measurement situations with metric and customary units.
Assessment Specifications	
Example Tasks	The student will be able to • write an equation to represent a real-world situation. • solve real-world situations involving addition and subtraction.
Assessment Guidelines	SC READY items will be limited to numbers all below 1,000. Students should only be completing real-world problems using addition and subtraction.
DOK(s)	2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.PAFR.2.3** Identify, create, and extend numerical patterns to determine the next three terms in an addition or subtraction sequence.
Indicator Insight	Use ordinal numbers such as first, second, and so on to describe the number in the sequence.
Assessment Specifications	
Example Tasks	The student will be able to • identify numerical patterns. • create numerical patterns based on rules. • extend numerical patterns up to three terms.
Assessment Guidelines	SC READY items will focus on addition and subtraction patterns.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**3.PAFR.2.4** Recognize that a whole number is a multiple of each of its factors 1–10.
Indicator Insight	Multiples can be determined by skip counting and should be limited to basic facts. Explore patterns in the multiplication table.
3.PAFR.2.4	**Assessment Specifications**
Example Tasks	The student will be able to • identify factors for a whole number • recognize that a whole number is a multiple of each of its factors.
Assessment Guidelines	SC READY items will focus on factors with whole numbers from 1 to 10. An example for recognizing that a whole number is a multiple of each of its factors would be: • The multiples of 4 are 4, 8, 12, …, 40, … because 4x1 = 4, 4x2=8, 4x3=12, … 4x10=40, …
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response