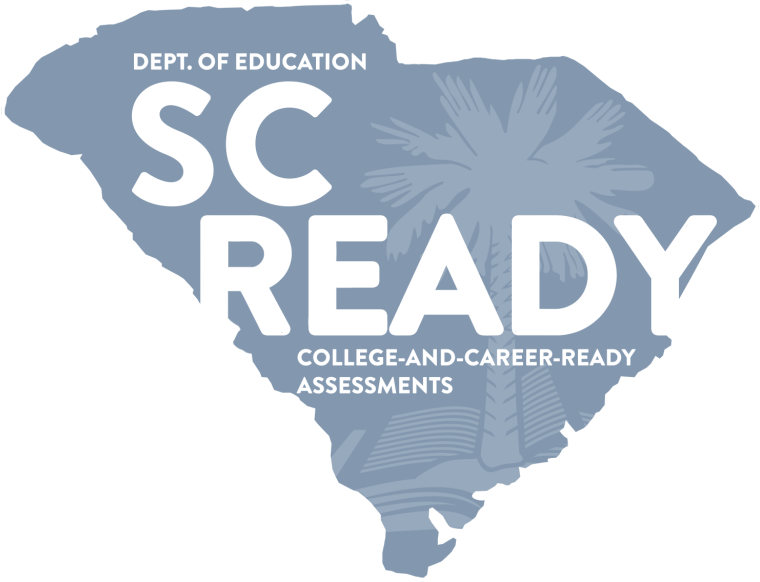
SOUTH CAROLINA
DEPARTMENT OF EDUCATION



Mathematics Assessment Specifications for Teachers
5th Grade

Office of Assessment and Standards

Updated September 2026

South Carolina Department of Education

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

Selected-Response (SR) Items: SR items have four answer choices, including three 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.

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 answers or writing a mathematical expression or equation to answer the item.
Graphing Input	The student is presented with a graph. The student is expected to respond by plotting points, drawing a line, or labeling parts of the graph.

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 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.

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Data, Probability, and Statistical Reasoning (DPSR)

Standard 5.DPSR.1

Create questions, collect and analyze data, and communicate through multiple representations.

Math Vocabulary for Assessment: bar graph, categorical data, circle graph, data set, dot plot, eighth(s), fourth(s), half/halves, line graph, maximum, minimum, mode, numerical data, range, scale, survey, and table.

Indicator	**5.DPSR.1.1** Describe data by determining the range and mode, including whole numbers, fractional data, and decimal data. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, and 10, and limit decimals to decimals through the hundredths place.
Indicator Insight	Data should be given in context. In middle school, the terms for maximum and minimum will be referred to as upper extreme and lower extreme.
Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • determine the range and mode of a data set that includes context.
Assessment Guidelines	Students are expected to be able to work with data that includes whole numbers, fractions, and decimals. Students are expected to be able to work with multi-modal data. SC READY items will focus on fractions with denominators of 2, 3, 4, 5, 6, 8, and 10. Limit decimals to the hundredths. Students are expected to be able to use both the terms maximum and minimum.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.DPSR.1.2** Solve two-step, real-world situations using whole number and fractional data represented in tables, line graphs, scaled bar graphs, or dot plots. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.
Indicator Insight	Students should be familiar with coordinate graphs prior to the introduction of line graphs. Students could be expected to use any of the four operations.
5.DPSR.1.2 Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • solve two-step, real-world situations involving data displays.
Assessment Guidelines	Students are expected to be able to use all four operations to solve, as well as work with whole numbers and fractional data. SC READY items will focus on fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100. Data should be displayed in tables, line graphs, scaled bar graphs and dot plots. For SC READY items, interpreting the key to a scaled graph is not considered a step in solving the problem.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.DPSR.1.3** Analyze categorical and numerical data in graphical displays to make predictions or draw conclusions. Limit displays to tables, bar graphs, dot plots, line graphs, and circle graphs with scales of whole numbers, halves, fourths, and eighths.
Indicator Insight	The expectation is not to create circle graphs or include percentages. Integrate data collection with science and social studies content.
Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • analyze data in graphical displays to make predictions. • draw conclusions from graphical displays.
Assessment Guidelines	Students are not expected to create data displays, just analyze, predict, and draw conclusions from provided displays. SC READY items will focus on data displayed in tables, bar graphs, dot plots, line graphs, and circle graphs. Limit scales to whole numbers, halves, fourths, and eighths.
DOK(s)	2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 5.DPSR.2

Represent the probability of simple events and determine possible outcomes.

Math Vocabulary for Assessment: fair *n*-sided game piece, fair number cube, outcome, probability, and simple event.

Indicator	**5.DPSR.2.1** Represent the probability of a simple event as 0, a fraction, or 1. Limit fractions to denominators of 2, 3, 4, 5, 6, 8, 10, 20, and 25.
Indicator Insight	A simple event includes, but is not limited to, spinning a spinner, tossing a die, drawing one card, or flipping a coin.
5.DPSR.2.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • determine the probability of a simple event. • explain what it means for an event to have a probability of 0 or 1.
Assessment Guidelines	SC READY items will focus on fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 20, and 25. For SC READY items, the terms fair number cube or fair *n*-sided game piece will be used instead of "die" (singular form of dice).
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Measurement, Geometry, and Spatial Reasoning (MGSR)

Standard 5.MGSR.1

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

Math Vocabulary for Assessment: area, composite figure, cubes, cubic units, decompose, estimate, perimeter, square unit(s), and volume.

Indicator	**5.MGSR.1.1** Solve problems involving area and perimeter of composite figures by decomposing with rectangles.
Indicator Insight	Use concrete materials or grid paper with a shape drawn on it. Decompose rectilinear figures into smaller rectangles to find the area of each and then add them. Use square units to label area measurements.
5.MGSR.1.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • decompose a shape into rectangles. • determine the area of a composite shape. • determine the perimeter of a composite shape. • determine missing values in composite shapes when the area or perimeter are known.
Assessment Guidelines	Students are expected to be able to solve problems with fractional edge lengths as long as the lengths are limited to denominators of 2, 3, 4, 5, 6, 8, 10, 12, 25, and 100.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.MGSR.1.2** Estimate and measure the volume of a right rectangular prism with whole-number side lengths by filling it with unit cubes.
Indicator Insight	Use containers that can be accurately measured with the unit cubes you are using (ex: inch cubes with a right rectangular prism that measures in precise inch dimensions). Provide opportunities to recognize volume as an attribute of three-dimensional shapes that involves filling a space. Composite rectangular prisms are excluded. Use cubic units to label volume measurements.
5.MGSR.1.2	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • estimate the volume of a right rectangular prism. • measure volume of a right rectangular prism by filling with unit cubes. • recognize volume as an attribute of right rectangular prisms. • appropriately label volume.
Assessment Guidelines	SC READY items will focus on edge lengths that are whole number lengths. Students are not expected to solve volume of composite figures. Students are not expected to be assessed based on their knowledge of the formula or use of the formula.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 5.MGSR.2

Convert within a given measurement system and measure length.

Math Vocabulary for Assessment: centigram(s), centiliter(s), centimeter(s), convert/conversion, cup(s), customary unit(s), estimate, feet, fluid ounce(s), gallon(s), gram(s), height, hour(s), inch(es), kilogram(s), kiloliter(s), kilometer(s), length, liter(s), meter(s), metric unit(s), milligram(s), milliliter(s), millimeter(s), minute(s), ounce(s), pint(s), pound(s), quart(s), second(s), width, weight, and yard(s).

Indicator	**5.MGSR.2.1** Given the unit equivalencies, convert within a single system of measurement from larger units to smaller units and smaller units to larger units for length, weight, liquid volume, and time. Use these conversions in solving real-world situations. Limit units to inches, feet, yards, ounces, pounds, fluid ounces, cups, pints, quarts, gallons, seconds, minutes, hours, milli-, centi-, kilo-, and base units (grams, liters, meters).
Indicator Insight	Identify patterns and make generalizations about the concept that the larger the unit, the smaller the measure, and the smaller the unit, the larger the measure. Provide experiences performing more than one conversion to obtain the desired unit. Connect to multiplication and division units and, for metric conversions, connect to place value understanding of 10 times and $\frac{1}{10}$.
5.MGSR.2.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • convert within measurement systems. • determine the resulting unit from a conversion. • solve real-world problems involving unit conversion. • perform more than one conversion to arrive at an answer.
Assessment Guidelines	Students are provided with a reference sheet for the conversions (see Appendix: Student Reference Sheet). Students are expected to be familiar with the abbreviations for each measurements: in. – inches; ft. – feet; yd. – yard; oz. – ounce; lb. – pound; fl. oz. – fluid ounces; c. – cup; pt. – pint; qt. – quart; gal. – gallon; s – seconds; h – hours; mg – milligram; cg – centigram; g – gram; kg – kilogram; ml – milliliter; cl – centiliter; l – liter; kl – kiloliter; mm – millimeter; cm – centimeter; m – meter; km - kilometer.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.MGSR.2.2** Estimate and measure lengths to the nearest eighth of an inch or nearest millimeter.
Indicator Insight	Connect to equivalent fractions. Connect the ruler to the number line. Provide students opportunities in measuring to the nearest $\frac{1}{8}$ of an inch and millimeter both using a ruler and when given images of real-world objects aligned with a ruler.
5.MGSR.2.2	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • measure objects to the nearest eighth of an inch or nearest millimeter. • estimate lengths to the nearest eighth of an inch or nearest millimeter. • create a line plot to represent the objects measured. • place a ruler appropriately.
Assessment Guidelines	Students are expected to measure to the nearest centimeter, inch, half inch, and quarter inch as well. 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. Customary measurements may be expressed in 1/8ths or an equivalent fraction or whole number. Students will be expected to use the embedded online ruler found on the Online Tools Training (OTT) from the DRC Insight Assessment platform. Students are expected to be familiar with the abbreviations for each measurement: in. – inches; mm – millimeter; cm – centimeter; m – meter.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 5.MGSR.3

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

Math Vocabulary for Assessment: coordinate pair/ordered pair, coordinate plane, function table, origin, plot, quadrant, x-axis, and y-axis.

Indicator	**5.MGSR.3.1** Identify the origin, x-axis, and y-axis in the coordinate system. Write, plot, and label ordered pairs, including values in a function table, in the first quadrant of the coordinate plane.
Indicator Insight	This is the first-time graphing in the coordinate plane is introduced. Explain how the coordinates relate. Plot the point as the distance from the origin on each axis. In a function table, note that the input is the x-coordinate, and the output is the y-coordinate. Function tables are also called input/output tables. Use these terms interchangeably. Middle school will use the term function table.
5.MGSR.3.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • identify the origin, *x*-axis, and *y*-axis. • write ordered pairs represented on a coordinate system. • identify ordered pairs on a coordinate system. • plot ordered pairs using values from a function table. • plot ordered pairs on a coordinate system.
Assessment Guidelines	SC READY items will focus on the first quadrant in the coordinate system. Students are not expected to work with real-world context for this standard.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.MGSR.3.2** Represent mathematical and real-world situations by graphing, labeling, and interpreting points in the first quadrant of the coordinate plane.
Indicator Insight	Provide opportunities to find a point on the coordinate plane. It is important for students to examine the relationship between the x-axis and the y-axis. Real-world situations could include map situations.
Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • graph real-world or mathematical situations using points in the coordinate plane. • label ordered pairs representing real-world situation on a coordinate plane. • explain the meaning of coordinates of an ordered pair in a real-world situation.
Assessment Guidelines	SC READY items will focus on the first quadrant in the coordinate system.
DOK(s)	2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Numerical Reasoning (NR)

Standard 5.NR.1

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

Math Vocabulary for Assessment: benchmark, compare, decimal, decimal notation, digit, equation, equivalent, expanded form, exponent, expression, hundred(s), hundredth(s), is equal to (=), is greater than (>), is less than (<), million(s), one(s), period, place value, powers of 10, round, standard form, ten(s), tenth(s), thousand(s), thousandth(s), and word form.

Indicator	**5.NR.1.1** Read, write, and represent multi-digit numbers from 0 to 999 with decimals to the thousandths place. Use pictorial, word, standard, or expanded form with fraction or decimal notation.
Indicator Insight	Provide opportunities to explore with concrete objects, as this is the students' first exposure to thousandths. Base ten blocks and decimal grids can be used.
5.NR.1.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • write multi-digit numbers from 0 to 999 using models in word, standard, and expanded form. • convert from one representation of a number to another. • represent multi-digit numbers from 0 to 999 using models.
Assessment Guidelines	Students are expected to see numbers with decimals and fractions to expand on previous grades. SC READY items will focus on decimal place values within thousandths.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.NR.1.2** Explain how the value of a digit in a multidigit number changes if the digit moves one or more places to the left or right in the base ten system. Include decimals to the thousandths place.
Indicator Insight	Recognize that a digit to the left of another digit is ten times more, and a digit to the right of a digit is one tenth of the amount. Make the connection between decimal notation and place value.
5.NR.1.2	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • explain how the value of a digit in a multi-digit number changes if the digit moves one or more places to the left or right in the base ten system. • recognize the value of a digit one or more places to the left or right in the base ten system if the decimal changes.
Assessment Guidelines	SC READY items will focus on decimal places to nothing smaller than the thousandths.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.NR.1.3** Round decimal numbers up to 999 with decimals to the thousandths place to the nearest hundredth, tenth, or whole number.
Indicator Insight	The same number can be used to demonstrate what happens when it is rounded to various places. Use benchmark numbers and midpoint on a vertical or horizontal number line and plot the given number to visualize which benchmark the number is closest to.
5.NR.1.3	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • round decimal numbers to the nearest hundredth, tenth, or whole number. • recognize what number would round to a given value.
Assessment Guidelines	SC READY items will focus on numbers 0 through 999 and rounding place values to wholes, tenths, or hundredths.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.NR.1.4** Use patterns to explain the exponents when multiplying and dividing by powers of 10, not to exceed the thousandths place.
Indicator Insight	Focus on place value patterns within a place value chart rather than the decimal moving.
5.NR.1.4	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • determine the value of an expression when multiplying or dividing by a power of 10. • explain the patterns seen when multiplying and dividing by powers of 10.
Assessment Guidelines	SC READY items will be limited to the thousandths place.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 5.NR.2

Represent and compare fractions in multiple ways.

Math Vocabulary for Assessment: common denominators, compare, equivalent, fraction, hundred(s), fractions greater than one (improper fraction), is equal to (=), is greater than (>), is less than (<), like/unlike denominators, and mixed number.

Indicator	**5.NR.2.1** Compare fractions and mixed numbers with like and unlike denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, and 100 using equivalence to create a common denominator. Use the symbols for is less than (<), is more than (>), or is equal to (=) to record the comparison.
Indicator Insight	Students should be able to apply these comparisons in real-world situations such as recipes and measurement.
5.NR.2.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • compare fractions and mixed numbers with like and unlike denominators. • write a comparison statement using <, >, or =. • create equivalent fractions with common denominators for fractions with unlike denominators.
Assessment Guidelines	Students are expected to be able to solve problems involving fractions greater than one (improper fractions). SC READY items will focus on fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, and 100.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Patterns, Algebra, and Functional Reasoning (PAFR)

Standard 5.PAFR.1

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

Math Vocabulary for Assessment: compute, decimal, difference, divide, dividend, divisor, factor, hundredth(s), multiply, product, quotient, remainder, standard form, sum, and tenth(s).

Indicator	**5.PAFR.1.1** Use a strategy to compute the product of a two- or three-digit factor times a two-digit factor to include real-world situations.
Indicator Insight	Strategies should include a standard algorithm. Connect a standard algorithm to the partial products algorithm as well as the area model for multiplication. Continue to use the Distributive Property as a strategy when multiplying.
5.PAFR.1.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • compute the product of a two- or three-digit factor times a two-digit factor.
Assessment Guidelines	Students are expected to know the standard algorithm as well as other strategies. Expose students to the multiplication cross symbol (x), as well as the multiplication dot symbol (·) when working with numerical expressions. Students are not expected to be assessed on a particular strategy but can be asked to explore the connection between two strategies.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.1.2** Use a strategy to compute the quotient of a multi-digit whole number dividend divided by a two-digit whole number divisor, with and without remainders, to include real-world situations. Limit the dividend to four digits.
Indicator Insight	Strategies should include a standard algorithm. Connect a standard algorithm to the partial quotients algorithm as well as open arrays and repeated subtraction. Continue to use the Distributive Property as a strategy when dividing. Interpret remainders in alignment with the context. Students should determine whether: • the remainder should be ignored, • one should be added to the quotient, or • the remainder should be written as a fraction.
5.PAFR.1.2	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • compute the quotient of a multi-digit whole number dividend divided by a two-digit whole number divisor. • interpret the meaning of the remainder in a division problem with context.
Assessment Guidelines	SC READY items will focus on a dividend of 4 digits and divisor of 2 digits. Students are not expected to be assessed on particular strategies.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.1.3** Use a strategy to compute sums and differences of decimal numbers to the hundredths
Indicator Insight	Strategies should include a standard algorithm. Include using money and making change.
Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • compute the sum of decimal numbers. • compute the difference of decimal numbers.
Assessment Guidelines	SC READY items will focus on numbers up to the hundredths place value. Students are not expected to be assessed on particular strategies.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.1.4** Use a strategy to multiply a one-digit whole number by a decimal to the hundredths and divide a decimal to the hundredths (dividend) by a one-digit whole number (divisor). Justify the calculation.
Indicator Insight	The intent of this standard is that the decimal number is between zero and one, having no whole number place value positions. Strategies should include, but are not limited to, concrete models and decimal grids. Justify calculations by using strategies based on place value, the properties of operations, or the inverse relationship between multiplication and division. Provide context with money.
5.PAFR.1.4	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • multiply a one-digit whole number by a decimal to the hundredths. • divide a decimal to the hundredths (dividend) by a one-digit whole number (divisor). • justify multiplication or division calculation.
Assessment Guidelines	SC READY items will focus on whole numbers that are one-digit numbers and decimal numbers between zero and one. Expose students to the multiplication cross symbol (x), as well as the multiplication dot symbol (·) when working with numerical expressions. Items should not assess particular strategies unless more than one is used in an item and they are part of the justification.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 5.PAFR.2

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

Math Vocabulary for Assessment: compute, difference, divide, dividend, divisor, fraction, multiply mixed number, sum, and unit fraction.

Indicator	**5.PAFR.2.1** Use a strategy to compute sums and differences of fractions and mixed numbers with unlike denominators and justify the sum or difference to include real-world situations. Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.
Indicator Insight	Provide exposure to the following situations: fraction - fraction, mixed number - fraction, and mixed number - mixed number. The use of equivalent fractions should be the foundation of finding common denominators. Introduce students to least common multiple (LCM). Provide opportunities to use pictorial and concrete models to add and subtract fractions.
5.PAFR.2.1	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • find the sum of fractions and mixed numbers with unlike denominators. • find the difference of fractions and mixed numbers with unlike denominators. • justify the sum or difference of fractions and mixed numbers with unlike denominators.
Assessment Guidelines	SC READY items will focus on denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100. Students are not expected to be assessed on particular strategies.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.2.2** Use a strategy to multiply a fraction by a fraction or a fraction by a whole to include real-world situations. Limit denominators to 2, 3, 4, 5, 6, 8, 10, and 12.
Indicator Insight	Fractions should include standard fractions, mixed numbers, and fractions greater than 1. Initially, models should be represented before moving to the procedure of multiplying fractions.
5.PAFR.2.2	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • multiply a fraction by a fraction. • multiply a fraction by a whole number. • solve real-world situations involving multiplying a fraction by a fraction or a fraction by a whole number.
Assessment Guidelines	SC READY items will focus on fractions with denominators of 2, 3, 4, 5, 6, 8, 10, and 12. Expose students to the multiplication cross symbol (x), as well as the multiplication dot symbol (·) when working with numerical expressions. Items should not assess particular strategies.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.2.3** Interpret and represent division of a whole number dividend by a unit fraction divisor and a unit fraction dividend by a whole number divisor and apply to real-world situations. Limit denominators to 2, 3, 4, 5, 6, 8, 10, and 12.
Indicator Insight	Strategies should include concrete, area, linear models, and/or equations. Avoid the use of "keep, change, flip" in presenting this indicator.
Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • interpret the meaning in a division problem with a whole number dividend divided by a unit fraction divisor. • interpret the meaning in a division problem with unit fraction dividend divided by a whole number divisor. • solve division problems with a whole number dividend divided by a unit fraction divisor. • solve division problems with a unit fraction dividend divided by a whole number divisor. • represent the problems using models or equations.
Assessment Guidelines	SC READY items will focus on fractions with denominators of 2, 3, 4, 5, 6, 8, 10, and 12.
DOK(s)	1, 2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Standard 5.PAFR.3

Use reasoning to represent and solve algebraic and numerical situations.

Math Vocabulary for Assessment: common denominator, denominator, evaluate, factor, function table, greatest common factor (GCF), least common multiple (LCM), multiple, numerical expression, numerical pattern, parentheses, rule, simplify, and standard form of a fraction.

Indicator	**5.PAFR.3.1** Determine the least common multiple (LCM) to find a common denominator. Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.
Indicator Insight	Use the limited denominators listed in the indicator to create a common denominator. Avoid multiplying the two denominators together to determine finding the common denominator, as this does not always produce the least common denominator. For example, if given $\frac{2}{5} + \frac{3}{10}$, the least common denominator is not 50.
Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • find the least common multiple of two numbers. • find a common denominator using least common multiple to create equivalent fractions.
Assessment Guidelines	SC READY items will focus on fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 50, and 100.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.3.2** Determine the greatest common factor (GCF) of two numbers both less than or equal to 50 to simplify a fraction into its standard form.
Indicator Insight	The standard form of a fraction is the simplest form. The terms prime and composite were introduced in fourth grade when learning about factor pairs of whole numbers 1–50.
5.PAFR.3.2	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • find the greatest common factor of two numbers. • simplify fractions to standard form.
Assessment Guidelines	SC READY items will focus on both numbers being 50 or less.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.3.3** Identify a rule that can describe the pattern from the data of a function table and write it as an expression.
Indicator Insight	Function tables are also called input/output tables. Use these terms interchangeably. Middle school will use the term function table.
Assessment Specifications	
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • identify the rule for a pattern given as a function table. • write an expression to represent a rule.
Assessment Guidelines	Students are expected to be able to use all 4 operations with sequences. Expose students to the multiplication cross symbol (x), as well as the multiplication dot symbol (·) when working with numerical expressions. Students are not expected to extend patterns, as that is a Grade 4 expectation. SC READY items will focus on one-step rules and use the limits of 5.PAFR.2.1, 2.2, and 2.3 when working with fractions.
DOK(s)	1, 2
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Indicator	**5.PAFR.3.4** Translate a two-step real-world situation into a numerical expression using parentheses as grouping symbols and evaluate the expression.
Indicator Insight	Avoid teaching PEMDAS, as the intent of this indicator is on students making sense of the problem. They must understand that there is an agreed-to order for solving operations. Expressions should not require the understanding of Order of Operations. Students should learn to operate within the parentheses as a first step.
5.PAFR.3.4	**Assessment Specifications**
Example Tasks *(This list is non-exhaustive.)*	The student will be able to • translate a two-step real-world situation into a numerical expression using parentheses as grouping symbols. • evaluate a numerical expression.
Assessment Guidelines	Expose students to the multiplication cross symbol (x), as well as the multiplication dot symbol (·) when working with numerical expressions. SC READY items will focus on performing the operation in parentheses first. Students are not expected to see brackets or braces.
DOK(s)	2, 3
Item Types	Selected-Response Technology-Enhanced Technology-Enhanced Constructed-Response

Appendix: Student Reference Sheet

A reference sheet of appropriate conversions is provided to students in Grades 4-5 during testing. Below is the information provided to students in Grade 5.

SC READY Mathematics Reference Sheet

Grade 5

Conversions

Metric	Customary
1 centimeter = 10 millimeters 1 meter = 100 centimeters 1 kilometer = 1,000 meters	1 foot = 12 inches 1 yard = 3 feet
1 centiliter = 10 milliliters 1 liter = 100 centiliters 1 kiloliter = 1,000 liters	1 cup = 8 fluid ounces 1 pint = 2 cups 1 quart = 2 pints 1 gallon = 4 quarts
1 centigram = 10 milligrams 1 gram = 100 centigrams 1 kilogram = 1,000 grams	1 pound = 16 ounces

Time
60 seconds = 1 minute 60 minutes = 1 hour