Proficiency Scales

Mathematics
Grade 5
2020

SOUTHWESTERN UNION

EDUCATION

PROFICIENCY SCALES

Proficiency scales serve as a starting point for unit planning, creating assessments, delivering instruction, grading, and reporting progress, as well as making teaching visible to students and guiding their growth on the standards. Specifically, a proficiency scale is a continuum or learning progression that articulates distinct levels of knowledge and skills relative to specific standards. It shows teachers and students what proficiency looks like, what knowledge and skills students need to achieve proficiency, and how students might go beyond proficiency.

A proficiency scale is composed of a series of levels as follows:

Score 3.0—Heart of the proficiency scale; it defines the target content that teachers expect all students to know and be able to do. I CAN statements are provided for this level.

Score 2.0—Simpler content; it describes the foundational knowledge and skills that students will need to master before progressing to proficiency.

Score 4.0—Challenging content; it provides students the opportunity to go above and beyond expectations by applying their knowledge in new situations or demonstrating understanding beyond what the teacher teaches in class. A generic statement is provided for this level.

Scores 1.0 and 0.0—No specific content; 1.0 indicates that a student can demonstrate some knowledge or skill with help from the teacher, but not independently; 0.0 means that, even with help, a student cannot show any understanding. Generic statements are provided for these levels.

Half-point Scores—More precise measurement of knowledge and skills that is between two levels. Generic statements are provided for these levels.

Proficiency scales become the centerpiece of communication and understanding in the classroom, as well as the common language for discussing learning between teacher and student.

The proficiency scales are organized according to the domains and strands in the NAD standards.

The cognitive rigor or complexity of the 3.0 learning targets has also been included, for it impacts the selection of instructional activities as well as assessment tasks. The Depth of Knowledge (DOK) model is generally used for this purpose, which is a taxonomy of four levels of cognitive demand. The levels are:

- **Level 1**—Recall
- **Level 2**—Skill/Concept
- **Level 3**—Strategic Thinking
- **Level 4**—Extended Thinking

Depth of Knowledge (DOK) Levels

Draw Identify List
Define Memorize Label
Calculate Illustrate
Arrange Who, What, When, Where, Why Measure
State Name
Repeat Tabulate Report Infer
Design Tell Use
Recall Quote Categorize
Recognize
Recite Match Collect and Display

Level One (Recall)

Identify Patterns
Connect Graph Organize
Synthesize Classify Construct
Separate
Apply Concepts **Level Four** (Extended Thinking) Describe Explain Interpret **Level Two** (Skill/Concept) Cause/Effect Modify
Critique Estimate Predict
Interpret
Compare Distinguish
Analyze **Level Three** (Strategic Thinking) Relate
Create Use Context Cues
Revise Assess Make Observations
Prove Develop a Logical Argument Summarize
Apprise Construct Show
Use Concepts to Solve Non-Routine Problems
Critique Compare
Explain Phenomena in Terms of Concepts
Formulate Investigate
Draw Conclusions
Hypothesize Differentiate
Cite Evidence

Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
Recall elements and details of story structure, such as sequence of events, character, plot and setting.	Identify and summarize the major events in a narrative.	Support ideas with details and examples.	Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/ solutions.
Conduct basic mathematical calculations.	Use context cues to identify the meaning of unfamiliar words.	Use voice appropriate to the purpose and audience.	Apply mathematical model to illuminate a problem or situation.
Label locations on a map.	Solve routine multiple-step problems.	Identify research questions and design investigations for a scientific problem.	Analyze and synthesize information from multiple sources.
Represent in words or diagrams a scientific concept or relationship.	Describe the cause/effect of a particular event.	Develop a scientific model for a complex situation.	Describe and illustrate how common themes are found across texts from different cultures.
Perform routine procedures like measuring length or using punctuation marks correctly.	Identify patterns in events or behavior.	Determine the author's purpose and describe how it affects the interpretation of a reading selection.	Design a mathematical model to inform and solve a practical or abstract situation.
Describe the features of a place or people.	Formulate a routine problem given data and conditions. Organize, represent and interpret data.	Apply a concept in other contexts.	

DISCIPLINARY TRANSFER GOALS

There are a small number of overarching, long-term transfer goals in each subject area. They are meant to be integrated within and across grade-level instruction. Below are the transfer goals for math.

1. Make sense of problems and persevere in solving them.

2. Reason abstractly and quantitatively.

3. Construct viable arguments and critique the reasoning of others.

4. Model with mathematics.

5. Use appropriate tools strategically.

6. Attend to precision.

7. Look for and make use of structure.

8. Look for and express regularity in repeated reasoning.

ESSENTIAL QUESTIONS AND BIG IDEAS
for MATH DOMAINS

5

Numbers and Operations

Essential Question: What does numerical reasoning involve and what does it demonstrate about God's world?

Big Idea: Numerical reasoning with whole numbers and fractions demonstrates dependability and order in God's world.

Operations and Algebraic Thinking

Essential Question: How do mathematical operations connect us to an infinite God?

Big Idea: Solving problems through mathematical operations reveals numerical patterns that demonstrate God's unchanging order and constancy.

Measurement

Essential Question: What do the systems of measurement reveal about God's creation?

Big Idea: Accurately measuring and quantifying objects in God's creation demonstrates His dependability and precision.

Geometry

Essential Question: What does geometry reveal about God?

Big Idea: God is revealed as the Master Designer when geometry is used as a means of describing the attributes of the physical world.

Data Analysis, Statistics, and Probability

Essential Question: How can we collect and use information in a way that reflects God's orderly creation?

Big Idea: Information from God's vast creation can be measured, recorded, and displayed to assist in understanding and decision making.

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Place Value**	Grade: **5**

Standards: 5.NO.1 Read, write, and compare decimals to the thousandths place using standard, number name, and expanded forms; round decimals to any place (5.NBT.3,4)
5.NO.2 Explain patterns in relation to the powers of 10 (5.NBT.1,2)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Use whole number exponents to denote powers of 10 *(e.g., 234 ÷100 = 234 ÷ 10²)* **DOK 2** **I can represent powers of 10 using whole number exponents.** • Compare two decimals to thousandths using >, =, < symbols *(e.g., when given the decimal values 4.69, 4.1701, 4.069, and 4.6900, compare the numbers using <, =, >)* **DOK 3** **I can compare decimals to the thousandths using >, =, <.** • Round decimals to any place **DOK 2** **I can round decimals to any place.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Base-ten numeral, compare, decimal, decimal point, digit, divide, expanded form, exponent, multiply, number, number name, pattern, place, powers of 10, represent, round, symbol, thousandths, value, whole number* The student will perform basic processes, such as: • Describe the value of digits in a multi-digit number *(e.g., a digit in one 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)* • Explain patterns in the number of zeroes and the decimal point when multiplying or dividing by powers of 10 *(e.g., to multiply a whole number by a power of ten, add the same number of zeros to the end of the number as the power of ten; to multiply decimals by a power of ten, move the decimal to the right for each power of ten; to divide decimals by a power of ten, move the decimal to the left for each power of ten)* • Read and write decimals to thousandths using base-ten numerals, number names, and expanded form (e.g.*, 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000); three hundred forty seven and three*	

		hundred ninety-two thousandths)
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Basic Operations**	Grade: **5**

| **Standard:** 5.NO.3 Multiply multi-digit whole numbers; divide using a two-digit divisor and up to a four-digit dividend; add, subtract, multiply, and divide decimals up to the hundredths place (5.NBT.5,6,7) |||

Score 4.0		In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0		The student will: • Divide whole numbers with up to four-digit dividends and two-digit divisors using the standard algorithm (e.g., *find the quotients for 9,000 ÷ 60; 4,812 ÷ 12; and 2,525 ÷ 25)* and explain the strategies used *(e.g., strategies based on place value, the properties of operations, and/or the relationship between addition and subtraction)* **DOK 3** **I can divide whole numbers with up to four-digit dividends and two-digit divisors and explain the reasoning used.** • Add, subtract, multiply, and divide decimals to hundredths using the standard algorithm *(e.g., 6.11 + 56.39; 5.32 – 2.7; 7 x 0.26; 5 ÷ 0.25)* and explain the strategies used *(e.g., strategies based on place value, the properties of operations, and/or the relationship between addition and subtraction)* **DOK 3** **I can add, subtract, multiply, and divide decimals to hundredths and explain the reasoning used.**
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0		The student will recognize or recall vocabulary such as: • *Algorithm, area model, decimal, digit, divide, dividend, division, divisor, equation, hundredths, model, multiplication, multiply, place value, properties of operations, quotient, reasoning, rectangular array, standard, strategy, whole number* The student will perform basic processes, such as: • Multiply multi-digit whole numbers using the standard algorithm *(e.g., 938 x 24; 11,000 x 50; and 1,293 x 374)* • Divide whole numbers with up to four-digit dividends and two-digit divisors using equations, rectangular arrays, and/or area models *(e.g., find the quotients for 9,000 ÷ 60; 4,812 ÷ 12; and 2,525 ÷ 25)* • Add, subtract, multiply, and divide decimals to hundredths using concrete models or drawings *(e.g., 6.11 + 56.39; 5.32 – 2.7; 7 x 0.26; 5 ÷ 0.25)*

	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Fractions**	Grade: **5**

Standard: 5.NO.4 <u>Add and subtract fractions and mixed numbers with unlike denominators;</u> multiply a fraction or a whole number by a fraction; divide fractions by whole numbers (5.NF.1,2)

Score 4.0		In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0		The student will: • Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators *(e.g., John's paper strip is 7/8" long and Adele's is 3/4" long. Who has the longer strip and by how much? Use a visual fraction model or equation to represent the problem. Use benchmark fractions to estimate and check for reasonableness.)* ***DOK 3*** **I can solve word problems involving addition and subtraction of fractions with unlike denominators.**
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0		The student will recognize or recall vocabulary such as: • *Add, addition, assess, benchmark fraction, denominator, difference, estimate, equation, equivalent, fraction, like, mentally, mixed number, model, number sense, reasonableness, refer, represent, subtract, subtraction, sum, unlike, whole, word problem* The student will perform basic processes, such as: • Add and subtract fractions with unlike denominators, including mixed numbers *(e.g., (2/3) + (5/4) = (8/12) + (15/12) = 23/12, where given fractions are replaced with equivalent fractions to produce an equivalent sum or difference of fractions with like denominators)* • Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers *(e.g., recognize an incorrect result (2/5) + (1/2) = 3/7 by observing that (3/7) < (1/2))*
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0		With help, partial success at score 2.0 content and score 3.0 content

	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Fractions**	Grade: **5**

| **Standard:** 5.NO.4 Add and subtract fractions and mixed numbers with unlike denominators; multiply a fraction or a whole number by a fraction; divide fractions by whole numbers (5.NF.3,4,5,6,7) |||

Score 4.0		In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0		The student will: • Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers *(e.g., If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie? Use visual fraction models or equations to represent the problem.)* **DOK 3** **I can solve word problems involving division of whole numbers with answers in fractions or mixed numbers.** • Solve real-world problems involving multiplication of fractions and mixed numbers *(e.g., Gabe is barely 2 3/5 years old. He has spent 1/3 of his life sleeping or crying. How much of his short life has Gabe spent either sleeping or crying in years? Use visual fraction models or equations to represent the problem.)* **DOK 3** **I can solve real-world problems involving multiplication of fractions and mixed numbers.** • Solve real-world problems involving division of unit fractions by whole numbers and division of whole numbers by unit fractions *(e.g., How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? Use visual fraction models and equations to represent the problem.)* **DOK 3** **I can solve real-world problems involving division of unit fractions by whole numbers and division of whole numbers by unit fractions.**
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content

Score 2.0	The student will recognize or recall vocabulary such as:
	• *Denominator, division, equation, fraction, interpret, mixed number, multiply, numerator, product, quotient, represent, scaling, unit, whole number*
	The student will perform basic processes, such as:
	• Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$) *(e.g., interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4)*
	• Interpret the product *a/b x q* as *a* parts of a partition of *q* into *b* equal parts, or as the result of *a x q ÷ b* (e.g*., use a visual fraction model to show (2/3) x 4 = 8/3, and create a story context for this equation)*
	• Multiply a fraction by a whole number or a fraction *(e.g., find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths)*
	• Interpret multiplication as scaling or resizing *(e.g., multiplying a given number by a fraction greater than 1 results in a product greater than the given number; multiplying a given number by a fraction less than 1 results in a product smaller than the given number)*
	• Divide a unit fraction by a whole number *(e.g., Create a story context for (1/3) ÷ 4 and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) x 4 = 1/3.)*
	• Divide a whole number by a unit fraction *(e.g., Create a story context for 4 ÷ (1/5) and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 x (1/5) = 4.)*
	Score 1.5 — Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content
	Score 0.5 — With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success

Subject: **Math**	Domain: **Numbers and Operations/ Operations and Algebraic Thinking** Strand: **Fractions/Factors**	Grade: **5**

Standards: 5.NO.5 Simply fractions to lowest terms		
5.OAT.2 Find the Least Common Multiple (LCM) and Greatest Common Factor (GCF) of two numbers		

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Reduce fractions to lowest terms *(e.g., reduce each fraction to its lowest terms: 2/4, 35/40, 10/16, 8/36)* **DOK 3** **I can reduce fractions to lowest terms.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Denominator, fraction, greatest common factor (GCF), least common multiple (LCM), lowest terms, numerator, reduce* The student will perform basic processes, such as: • Explain Greatest Common Factor (GCF) and Least Common Multiple (e.g., L*east Common Multiple is the smallest number that is a multiple of two or more numbers; Greatest Common Factor is the greatest factor that is common to two or more numbers)* • Find the Greatest Common Factor (GCF) and the Least Common Multiple (LCM) of two or more numbers *(e.g., find the GCF and the LCM of 84 and 56)* • Explain that to reduce fractions to lowest terms, divide the numerator and denominator by their Greatest Common Factor (GCF) (*e.g., the GCF of 4/8 is 4; when the numerator and denominator are divided by 4, the lowest terms of 4/8 is 1/2)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	

	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Operations and Algebraic Thinking** Strand: **Numerical Expressions**	Grade: **5**

| **Standard:** 5.OAT.1 Write and interpret simple numerical expressions using parentheses, brackets, and braces (5.OA.1,2) |||

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Interpret numerical expressions with parentheses, brackets, or braces without evaluating them *(e.g., 3 x (183 + 921) is three times as large as 183 + 921)* **DOK 2** **I can interpret numerical expressions with parentheses, brackets, or braces.** • Evaluate numerical expressions with parentheses, brackets, or braces *(e.g., when given the numerical expressions 2 + 40 ÷ 4 + 4 x 5, 2 + 40 ÷ (4 + 4) x 5, and [2 + 40 ÷ (4 + 4)] x 5, describe the steps necessary to evaluate each expression; evaluate the expressions, writing out the new form of the expression for each step; explain why the expressions have different evaluations)* **DOK 3** **I can evaluate numerical expressions with parentheses, brackets, or braces.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Brace, bracket, calculation, evaluate, express, expression, interpret, numerical, order, parentheses, symbol* The student will perform basic processes, such as: • Explain that calculations with parentheses are evaluated first within an expression • Explain that expressions can be written using words or symbols • Explain that it is acceptable to change the order of an expression *(e.g., "add seven and six, then multiply by two" would get the same answer as (6 + 7) x 2 or 2 x (6 + 7))* • Write numerical expressions with parentheses, brackets, or braces *(e.g., expressing "add 8 and 7, then multiply by 2" as 2 x (8 + 7))*	

	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Operations and Algebraic Thinking** Strand: **Patterns**	Grade: **5**

| **Standard:** 5.OAT.3 Generate, identify the relationship, and graph ordered pairs using numerical patterns with two given rules (5.OA.3) |||

Score 4.0		In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0		The student will: • Form ordered pairs consisting of corresponding terms from two numerical patterns, and graph the ordered pairs on a coordinate plane *(e.g., when given that a pastry chef finds that she needs to make 12 cups of icing to ice 4 dozen cupcakes and 18 cups of icing to ice 6 dozen cupcakes, use a coordinate plane to graph her icing and cupcake production, draw a line to connect the points, and use the graph to determine how many cups of icing the pastry check needs to make for every dozen cupcakes she bakes)* **DOK 3** **I can form ordered pairs using the relationship between two number patterns and graph them on a coordinate plane.**
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0		The student will recognize or recall vocabulary such as: • *Coordinate plane, corresponding, generate, graph, interpret, numerical, ordered pair, pattern, point, relationship, rule, sequence, term* The student will perform basic processes, such as: • Generate two numerical patterns using two given rules, and identify relationships between corresponding terms in the two sequences *(e.g., given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence; explain why)*
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0		With help, partial success at score 2.0 content and score 3.0 content

	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0		Even with help, no success

Subject: **Math**	Domain: **Measurement** Strand: **Conversion**		Grade: **5**

Standard: 5.M.1 Convert like units within a given measurement system (e.g., cm to m, m to cm) (5.MD.1)			
Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught		
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Use conversions to solve multi-step word *problems (e.g., Brenda has a 1 liter bottle of shampoo that is only half-full. About how many milliliters of shampoo does she have in the bottle?)* **DOK 3** **I can convert measurement units to solve word problems.**		
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content	
Score 2.0	The student will recognize or recall vocabulary such as: • *Conversion, convert, measurement, standard, system, unit, word problem* The student will perform basic processes, such as: • Convert among different-sized standard measurement units within a given measurement system *(e.g., convert 5 cm to 0.05 m)*		
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content		
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content	
Score 0.0	Even with help, no success		

Subject: **Math**	Domain: **Measurement** Strand: **Volume**	Grade: **5**

Standard: 5.M.2 Understand concepts of volume measurement in cubic measure (cm³, in³, ft³) and apply to multiplication and addition (5.MD.3,4,5)		
Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: - Apply the formula V = l x w x h to find volumes of right rectangular prisms *(e.g., given a series of right rectangular prisms, use the formula V = l x w x h to determine the volumes)* **DOK 2** **I can find volumes of right rectangular prisms using the formula V = l x w x h.** - Find volumes of solid figures composed of two nonoverlapping right rectangular prisms by adding the volumes of the parts *(e.g., Erica is going on a vacation. One of her suitcases has a volume of 3 cubic feet, and the other has a volume of 2 cubic feet. What is the total volume of Erica's two suitcases?)* **DOK 3** **I can find volumes of solid figures made of two rectangular prisms by adding the volumes of the two parts.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: *Add, attribute, centimeter, count, cube, cubic, foot, figure, formula, improvised, inch, measure, multiply, overlap, part, relationship, right rectangular prism, solid, sum, unit cube, volume* The student will perform basic processes, such as: - Explain that volume is an attribute of solid figures - Explain that a cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume - Explain that a solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units - Measure volume by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units and understand the relationship between the sum of the cubes and the volume formula, V = l x w x h *(e.g., given a right rectangular prism, count the cubes to determine volume and compare the count to multiplying l x w x h of the figure)*	

		• Explain that volume is additive
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Measurement** Strand: **Geometric Measurement**	Grade: **5**

Standard: 5.M.3 Know the relationship between radius and diameter		
Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Explain and confirm the relationship between radius and diameter *(e.g., radius is half of the diameter; find the diameter of a circle whose radius is 4.5 cm)* **DOK 2** **I can show and explain the relationship between the radius and diameter of a circle.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Area, express, partition, shape, unit fraction, whole* The student will perform basic processes, such as: • Explain what radius means *(e.g., distance from the center outwards in a circle)* • Explain what diameter means *(e.g., distance straight across a circle through the center)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Geometry** Strand: **Graphs**	Grade: **5**

Standard: 5.GEO.1 Graph points in the first quadrant of the coordinate plane to solve real-world and mathematical problems (5.G.1,2)		
Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Graph points in the first quadrant of the coordinate plane *(e.g., when given a set of ordered pairs, graph the pairs as points in the first quadrant of the coordinate plane)* **DOK 2** **I can graph points in the first quadrant of the coordinate plane.** • Interpret coordinate values of points according to the context *(e.g., when given a coordinate plane in which the x-axis represents the numbered avenues of a city and the y-axis represents numbered streets, and when given that a person at the corner of 2nd Avenue and 4th Street walks 4 blocks north, 3 blocks east, and 1 block south, identify the person's final location and then determine the shortest possible route they could have taken)* **DOK 3** **I can use a coordinate plane to solve problems.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Axis, context, coordinate, coordinate plane, coordinate points, coordinate system, graph, interpret, intersection, number, number line, ordered pair, origin, perpendicular, plane, point, position, quadrant* The student will perform basic processes, such as: • Describe the coordinate system as a pair of perpendicular number lines, called axes, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates • Explain that the first number in an ordered pair indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond *(e.g., x-axis and x-coordinate, y-axis and y-coordinate)* • Describe how to find a given point on the plane (*e.g., use an ordered pair of*	

		numbers corresponding to a position on each number line or axis)
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Geometry** Strand: **Sides/Angles**	Grade: **5**

Standard: 5.GEO.2 Classify two-dimensional figures into categories based on their properties of sides and angles (5.G.3,4)		
Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Classify two-dimensional figures in a hierarchy based on properties *(e.g., when given a two-dimensional figure, identify the categories to which the figure belongs and explain which properties place it within those categories)* **DOK 3** **I can classify two-dimensional figures into categories based on their properties.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Angle, attribute, category, classify, figure, hierarchy, property, side, subcategory, two dimensional* The student will perform basic processes, such as: • Describe the properties of two-dimensional figures *(e.g., when given a two-dimensional figure, describe it based on the properties of sides and angles)* • Explain that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category *(e.g., all rectangles have four right angles and squares are rectangles, so all squares have four right angles)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Data Analysis, Statistics, and Probability** Strand: **Data**		Grade: **5**

Standard: 5.DSP.1 Use basic operations to solve problems using a line plot to display a data set of measurement in fractions of a unit (halves, fourths, and eighths) (5.MD.2)			
Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught		
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Use basic operations to solve problems involving line plots with data in fractions of a unit (1/2, 1/4, 1/8) *(e.g., given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally)* **DOK 3** **I can solve problems using a line plot with measurement data in fractions of a unit.**		
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content	
Score 2.0	The student will recognize or recall vocabulary such as: • *Data, fraction, line plot, measurement, operations, unit* The student will perform basic processes, such as: • Make a line plot of measurement data in fractions of a unit (1/2, 1/4, 1/8) *(e.g., measure the head circumference of all the students to the nearest 1/4 inch and display the results on a line plot)*		
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content		
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content	
Score 0.0	Even with help, no success		

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Subject: **Math**	Domain: **Data Analysis, Statistics, and Probability** Grade: **5** Strand: **Data**

Standard: 5.DSP.2 Find the mean, median, mode, and range of a given set of data			
Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught		
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Find the mean, median, mode, and range of a set of data *(e.g., given the ages of five students, find the mean, median, mode, and range of the data)* **DOK 2** **I can find the mean, median, mode, and range of a set of data.**		
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content	
Score 2.0	The student will recognize or recall vocabulary such as: • *Data, greatest, least, mean, median, mode, numerical, order, range* The student will perform basic processes, such as: • List in numerical order from least to greatest a set of data *(e.g., given the ages of five students, list the data in numerical order)*		
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content		
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content	
Score 0.0	Even with help, no success		