



F.5 - Grade 5 Math

PUBLISHER/PROVIDER MATERIAL INFORMATION (TO BE COMPLETED BY PUBLISHER/PROVIDER)

Publisher/Provider Name/Imprint:		Grade(s):	
Title of Student Edition:		Student Edition ISBN:	
Title of Teacher Edition:		Teacher Edition ISBN:	
Title of SE Workbook:		SE Workbook ISBN:	

PUBLISHER/PROVIDER CITATION VIDEO: Reviewer must view video before starting the review of this set of materials.

Citation Video Link:			
Citation video certification:	I certify that I have viewed the citation video for this specific publisher and set of materials.		
Digital Material Log In: <i>(Include ONLY if submitting digital materials as part of the review set listed above.)</i>	Website:	Username:	Password:

Section 1: Standards Review -- Math Content Standards									
PUBLISHER/PROVIDER INSTRUCTIONS:									
<ul style="list-style-type: none"> • Publisher/Provider citations for this section will refer to the Teacher Edition (teacher-facing core material). The cited Teacher Edition should correspond with the title and ISBN entered on the Form F cover page, whether in print, online, or both. The review set submitted to the summer review institute should also correspond with what is cited on the Form F. If the review set is an online platform only, then that is what should be cited on the Form F and submitted for review by the review teams. If the review set is in print only, then that is what should be cited on the Form F and submitted for review by the review teams. • For this section, the publisher/provider will enter one citation per math content standard in Column D. Each citation should direct the reviewer to a specific location in the materials that best meets the standard. The citations should be concise and should allow the reviewer to easily determine that all components of the standard have been met. Each citation should cover no more than 3 pages within the materials. <ul style="list-style-type: none"> o Column D: Enter one citation in Column D from the Teacher Edition (teacher-facing core material). Each citation should direct the reviewer to a specific location in the materials that best meets the standard. If necessary, you may enter multiple, targeted citations in order to address standards with multiple components. Use as few citations as needed to meet the full intent of the standard. Your citations should be concise and should allow the reviewer to easily determine that the full intent and all components of the standard have been met. <ul style="list-style-type: none"> o Any grayed out cells do not require a citation. o Column E: The material will be scored for alignment with each standard as "Meets expectations", "Partially meets expectations", or "Does not meet expectations" based on the citation provided. 									
Criteria #	Standard	F.5 Grade 5 Math Standards Review	Publisher/Provider Citation from Teacher Edition	Score	If Scored D: Reviewer's Evidence for Publisher Citation	Reviewer Citation from Student Edition/Workbook	Score	Required: Reviewer's Evidence	Comments, other citations, notes
DOMAIN: 5.OA - Operations and Algebraic Thinking									
Cluster: Write and interpret numerical expressions.									
1	5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.							
2	5.OA.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.</i>							
Cluster: Analyze patterns and relationships.									
3	5.OA.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. <i>For example, 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 informally why this is so.</i>							
DOMAIN: 5.NBT - Number and Operations in Base Ten									
Cluster: Understand the place value system.									
4	5.NBT.1	Recognize that in a multi-digit number, 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.							
5	5.NBT.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.							
6	5.NBT.3	Read, write and compare decimals to thousandths.							
7	5.NBT.3.a	Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.							
8	5.NBT.3.b	Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.							
9	5.NBT.4	Use place value understanding to round decimals to any place.							
Cluster: Perform operations with multi-digit whole numbers and with decimals to hundredths.									
10	5.NBT.5	Fluently multiply multi-digit whole numbers using the standard algorithm.							
11	5.NBT.6	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.							
12	5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.							
DOMAIN: 5.NF - Number and Operations—Fractions									
Cluster: Use equivalent fractions as a strategy to add and subtract fractions.									
13	5.NF.1	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. <i>For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$. (In general, $a/b + c/d = (ad + bc)/bd$).</i>							
14	5.NF.2	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. <i>For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</i>							
Cluster: Apply and extend previous understandings of multiplication and division to multiply and divide fractions.									
15	5.NF.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. <i>For example, 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 $3/4$. 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?</i>							
16	5.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.							
17	5.NF.4.a	Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. <i>For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)</i>							
18	5.NF.4.b	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. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.							
19	5.NF.5	Interpret multiplication as scaling (resizing) by:							
20	5.NF.5.a	Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.							

21	5.NF.5.b	Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.							
22	5.NF.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.							
23	5.NF.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.							
24	5.NF.7.a	Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$.							
25	5.NF.7.b	Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$.							
26	5.NF.7.c	Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $1/3$ -cup servings are in 2 cups of raisins?							
DOMAIN: 5.MD - Measurement and Data									
Cluster: Convert like measurement units within a given measurement system.									
27	5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.							
Cluster: Represent and interpret data.									
28	5.MD.2	Make a line plot to display a data set of measurements in fractions of a unit ($1/2, 1/4, 1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, 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.							
Cluster: Geometric measurement: Understand concepts of volume and relate volume to multiplication and addition.									
29	5.MD.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement.							
30	5.MD.3.a	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.							
31	5.MD.3.b	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.							
32	5.MD.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.							
33	5.MD.5	Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.							
34	5.MD.5.a	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.							
35	5.MD.5.b	Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.							
36	5.MD.5.c	Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.							
DOMAIN: 5.G - Geometry									
Cluster: Graph points on the coordinate plane to solve real-world and mathematical problems.									
37	5.G.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, 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. Understand that the first number 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).							
38	5.G.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.							
Cluster: Classify two-dimensional figures into categories based on their properties.									
39	5.G.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.							
40	5.G.4	Classify two-dimensional figures in a hierarchy based on properties.							

Section 2: Math Content Review

PUBLISHERS/PROVIDERS:

- The Math Content Review tab will be completed solely by the reviewers. They will score each criterion and provide evidence for their score from the material based on their overall review of the material. You will not provide any citations for this tab.
- The material will be scored for alignment with each criterion as “Meets expectations”, “Partially meets expectations”, or “Does not meet expectations”.

Criteria #	Grades K-12 Math Content Criteria	Score	Required: Reviewer's Evidence from Material <i>Include where you found the evidence in the material and what evidence you found that supports your score.</i>	Comments, citations, notes
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FOCUS AREA 1: RIGOR AND MATHEMATICAL PRACTICES
Materials support student mastery through a grade-appropriate balance of rigor: conceptual understanding, procedural fluency, and application.
Materials meaningfully connect the Content Standards (CCSS) with the Standards for Mathematical Practice (SMPs).

1	Conceptual Understanding: Materials support the intentional development of students’ conceptual understanding of key mathematical concepts.			
2	Procedural Skill and Fluency: Materials support intentional opportunities for students to develop procedural skills and fluencies in alignment with what is called for in the grade-level standards.			
3	Application: Materials support students’ ability to leverage mathematical skills, concepts, representations, and strategies across a range of contexts, (including applying learning to real-world situations and new contexts).			
4	Balance of Rigor: <i>With equitable intensity</i> The three aspects of rigor are not always treated together and are not always treated separately. The three aspects are balanced with respect to the standards being addressed in each grade level.			
5	SMPs 1 and 6 Materials support the intentional development of making sense of problems and attending to precision as required by the mathematical practice standards 1 and 6.			
6	SMPs 2 and 3 Materials support the intentional development of reasoning abstractly and quantitatively, along with developing viable arguments and critiquing the reasoning of others, in connection to the content standards, as required by the practice standards 2 and 3.			
7	SMPs 4 and 5 Materials support the intentional development of modeling and using tools, in connection to the content standards, as required by the mathematical practice standards 4 and 5.			
8	SMPs 7 and 8 Materials support the intentional development of seeing structure and generalizing, in connection to the content standards, as required by the mathematical practice standards 7 and 8.			

FOCUS AREA 2: STUDENT CENTERED INSTRUCTION
Materials contain embedded resources (routines, strategies, and pedagogical suggestions) to support all students in developing a positive mathematical identity, cultivating self-efficacy, and seeing themselves as a contributor to the math community.

9	Materials provide students with opportunities to develop self-efficacy and a positive mathematical identity through opportunities to engage in grade-level tasks using various sharing strategies and approaches.			
10	Materials provide opportunities for students to see themselves as contributors to the math community.			

FOCUS AREA 3: INSTRUCTIONAL SUPPORTS FOR ALL STAKEHOLDERS

Materials provide guidance and resources to support educators in internalizing the mathematical content and providing responsive and differentiated instruction to all students. Materials contain helpful resources to support implementation and instruction (e.g. materials for leaders, teachers, students, families/ caregivers, etc).

11	Teacher materials contain full, adult-level explanations and examples of the mathematics concepts within lessons so teachers can improve their own knowledge of the subject. Materials are in print or clearly distinguished/accessible as a teacher's edition in digital materials.			
12	The materials provide guidance for unit/lesson preparation to support use of the materials as intended and to further develop the teachers' own understanding of the mathematical approach.			
13	Teacher materials provide insight into students' ways of thinking with respect to important mathematical concepts, especially anticipating a variety of student responses.			
14	Materials contain strategies for informing parents or caregivers about the mathematics program and suggestions for how they can help support student progress and achievement.			

Section 2: All Content Review				
PUBLISHERS/PROVIDERS:				
<ul style="list-style-type: none"> The All Content Review tab will be completed solely by the reviewers. They will score each criterion and provide evidence for their score from the material based on their overall review of the material. You will not provide any citations for this tab. The material will be scored for alignment with each criterion as "Meets expectations", "Partially meets expectations", or "Does not meet expectations". 				
Criteria #	All Content Criteria Review	Score	Required: Reviewer's Evidence from Material <i>Include where you found the evidence in the material and what evidence you found that supports your score.</i>	Comments, citations, notes
FOCUS AREA 1: COHERENCE				
Instructional materials are coherent and consistent with the New Mexico Content Standards that all students should study in order to be college- and career-ready.				
1	Instructional materials address the full content contained in the standards for all students by grade level.			
2	Instructional materials support students to show mastery of each standard.			
3	Instructional materials require students to engage at a level of maturity appropriate to the grade level under review.			
4	Instructional materials are coherent, making meaningful connections for students by linking the standards within a lesson and unit.			
FOCUS AREA 2: WELL-DESIGNED LESSONS				
Instructional materials take into account effective lesson structure and pacing.				
5	The Teacher Edition presents learning progressions to provide an overview of the scope and sequence of skills and concepts. The design of the assignments shows a purposeful sequencing of teaching and learning expectations.			
6	Within each lesson of the instructional materials, there are clear, measurable, standards-aligned content objectives.			
7	Within each lesson of the instructional materials, there are clear, measurable language objectives tied directly to the content objectives.			
8	Instructional materials provide focused resources to support students' acquisition of both general academic vocabulary and content-specific vocabulary.			
9	The visual design of the instructional materials (whether in print or digital) maintains a consistent layout that supports student engagement with the subject.			
10	Instructional materials incorporate features that aid students and teachers in making meaning of the text.			
11	Instructional materials provide students with ongoing review and practice for the purpose of retaining previously acquired knowledge.			
FOCUS AREA 3: RESOURCES FOR PLANNING				
Instructional materials provide teacher resources to support planning, learning, and understanding of the New Mexico Content Standards.				
12	Instructional materials provide a list of lessons in the Teacher Edition (in print or clearly distinguished/ accessible as a teacher's edition in digital materials), cross-referencing the standards addressed and providing an estimated instructional time for each lesson, chapter, and unit.			
13	Instructional materials support teachers with instructional strategies to help guide students' academic development.			
14	Instructional materials include a teacher edition/ teacher-facing material with useful annotations and suggestions on how to present the content in the student edition/student-facing material and in the supporting material.			

15	Instructional materials integrate opportunities for digital learning, including interactive digital components.			
FOCUS AREA 4: ASSESSMENT				
Instructional materials offer teachers a variety of assessment resources and tools to collect ongoing data about student progress related to the standards.				
16	Instructional materials provide a variety of assessments that measure student progress in all strands of the standards for the content under review. <i>(Adopted New Mexico Content Standards for 2024: NM STEM Ready Science Standards)</i>			
17	Instructional materials provide multiple formative and summative assessments, clearly defining which standards are being assessed through content and language objectives.			
18	Instructional materials provide scoring guides for assessments that are aligned with the standards they address, and that offer teachers guidance in interpreting student performance and suggestions for further instruction, differentiation, and/or acceleration.			
19	Instructional materials provide appropriate assessment alternatives for English Learners, Culturally and Linguistically Diverse students, advanced students, and special needs students.			
20	Instructional materials include opportunities to assess student understanding and knowledge of the standards using technology.			
FOCUS AREA 5: EXTENSIVE SUPPORT				
Instructional materials give all students extensive opportunities and support to explore key concepts.				
21	Instructional materials can be customized or adapted to meet the needs of different student populations.			
22	Instructional materials provide differentiated strategies and/or activities to meet the needs of students working below proficiency and those of advanced learners.			
23	Instructional materials provide appropriate linguistic support for English Learners and Culturally and Linguistically Diverse students, and accommodations and modifications for other special populations that will support their regular and active participation in learning content.			
24	Instructional materials provide strategies and resources for teachers to inform and engage parents, family members, and caregivers of all learners about the program and provide suggestions for how they can help support student progress and achievement.			
25	Instructional materials include opportunities for all students that encourage and support critical and creative thinking, inquiry, and complex problem-solving skills.			
FOCUS AREA 6: CULTURAL AND LINGUISTIC PERSPECTIVES				
Instructional materials represent a variety of cultural and linguistic perspectives.				
26	Instructional materials inform culturally and linguistically responsive pedagogy by affirming students' backgrounds in the materials themselves and in the student discussions.			
27	Instructional materials provide a collection of images, stories, and information, representing a broad range of demographic groups, and do not make generalizations or reinforce stereotypes.			
28	Instructional materials provide context, illustrations, and activities for students to make interdisciplinary connections and/or connections to real-life experiences and diverse cultural and linguistic backgrounds.			
FOCUS AREA 7: INCLUSION OF CULTURALLY AND LINGUISTICALLY RESPONSIVE LENS				
Instructional materials highlight diversity in culture and language through multiple perspectives.				

29	Instructional materials include tools and resources to relate the content area appropriately to diversity in culture and language.			
30	Instructional materials include tools and resources that demonstrate multiple perspectives in a specific concept.			
31	Instructional materials engage students in critical reflection about their own lives and societies, including cultures past and present in New Mexico.			
32	Instructional materials address multiple ethnic descriptions, interpretations, or perspectives of events and experiences.			

Standards for Mathematical Practice	
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.