

**Los Angeles Unified School District**  
**Office of Curriculum, Instruction, and School Support**  
**2012-2013 Elementary Mathematics Instructional Guide (MIG)**

**Introduction to the Document:**

Welcome to the Los Angeles Unified School District’s Elementary Mathematics Instructional Guide (MIG). This MIG ensures the teaching and assessment of all grade level standards by the California Standards Testing dates. Additionally, the MIG is intended to be a one-stop tool for teachers, administrators, parents, and other school support personal. It blends CST blueprints, California State Mathematics Standards, enVisionMATH Topics which address those standards, and Instructional Blocks into one easy-to-read resource.

The MIG is a living document—it is neither set in stone for all time nor is it perfect. Teachers and other users are encouraged to provide on-going feedback as to its accuracy, usability, and content.

**Organization of the Document:**

This Instructional Guide for Mathematics has been organized in several ways to provide flexibility to teachers in planning instruction. Teachers and other users are encouraged to review the various versions and to choose the one that best fits their instructional planning needs.

Under the section *Organized by Standards*, the standards are listed as they are found in the Mathematics Framework for California Public Schools. In this section, teachers and other users will be able to see at a glance the mathematics standard number and wording for the grade level, the number of questions on the CST for each standard (applicable for 2<sup>nd</sup> through 6<sup>th</sup> grade), in which textbook topics (chapters) the standards can be found, and in which Instructional Block(s) the standard will be taught and assessed. For quick identification, the essential key standards, as determined by the Mathematics Framework, are noted by **bold type** and a key **↔** symbol.

Under the section *Organized by Instructional Block*, the standards are listed in a developmental sequence. A significant difference with this section versus the organization by standards is that, in some cases, portions of the standards are lined-out or modified for that particular Instructional Block (IB) as that part of the standard is not taught during that time. While the entire standard will be taught and assessed by the time the CST is given, some longer, more complex standards are parsed out over multiple IB’s to allow students time to develop their understanding of the concept and the essential skills they will need in order to be successful. Please note the following examples:

### Second Grade example:

Number Sense 1.2 asks student to:	Use words, models, and expanded forms (e.g., $45 = 4 \text{ tens} + 5$ ) to represent numbers (to 1,000).
How NS1.2 will look in IB#1:	Use words, models, and expanded forms (e.g., $45 = 4 \text{ tens} + 5$ ) to represent numbers (to <del>1,000</del> 100).
How NS1.2 will look in IB#3:	Use words, models, and expanded forms (e.g., $45 = 4 \text{ tens} + 5$ ) to represent numbers (to 1,000).

### Fourth Grade example:

Number Sense 2.1 asks students to:	Estimate and compute the sum or difference of whole numbers and positive decimals to two places.
How NS2.1 will look in IB#1:	Estimate and compute the sum or difference of whole numbers <del>and positive decimals to two places.</del>
How NS2.1 will look in IB#2:	Estimate and compute the sum or difference of whole numbers and positive decimals to two places.

As in the organized by standards section, this section allows teachers and other users to be able to see at a glance the mathematics standard number and wording for the grade level, the number of questions on the CST for each standard (applicable for 2<sup>nd</sup> through 6<sup>th</sup> grade), in which textbook topics (chapters) the standards can be found, and in which Instructional Block(s) the standard will be taught and assessed. Again for quick identification, the essential key standards, as determined by the Mathematics Framework, are noted by bold type and a key symbol.

### **Symbols and Footnotes:**

Additional key information has been embedded into this guide to assist teachers and others in instructional decision-making. Next to the numbers listed in the *enVisionMATH* topics section, occasionally there will be a symbol indicating that a topic has lessons that address standards outside of the targeted grade level. This is designed to assist in instructional decision-making when choosing lessons to prepare and present based on student needs. Please note the following examples:

First Grade example:

2† indicates that this topic contains lessons that include Kindergarten standards, whereas 18‡ indicates that this topic contains lessons that include Second grade standards.

Fifth Grade example:

5‡ indicates that this topic contains lessons that include Fourth grade standards, whereas 14⊕ indicates that this topic contains lessons that include Sixth grade standards.

All symbols used in the guide are defined in the footnote section of the document on every page.

### **General Calendar for Instruction and Assessment:**

The first three Instructional Blocks (IB) and their periodic assessments reflect the standards or portions of the standards as indicated in the *Organized by Instructional Block* portion of the guide. The guide is designed to ensure full instruction and assessment of the grade level standards by the CST window.

The fourth IB is scheduled for after the CST window. This block of time is intended for teachers to use, based on student data, to strengthen areas of weakness the students may still have (intervention) or to “step up” to the next grade level. This is where out-of-grade-level lessons which may have been skipped could be taught or other mathematical concepts could be deepened to support the students’ success in the next grade level.

### **Grade Level Expectations:**

Included on the first page of each grade level guide is a boxed statement of grade level expectations. This is taken directly from the Mathematics Framework for California Public Schools. This provides teachers, parents, students, administrators, and other instructional support staff an overview of what students should accomplish by the end of the targeted grade level.

### **Using the Mathematics Instructional Guide:**

The guide can be thought of as a menu. It cannot be expected that one would do every lesson and activity from the instructional resources provided. To try to teach every lesson or use every activity would be like ordering everything on a menu for a single meal. It is not a logical option. Nor is it possible given the number of instructional days and the quantity of resources. That is why the

document is called a "Mathematics Instructional Guide" and not a "Mathematics Pacing Plan." And, like a menu, teachers select, based on instructional data, which lessons best fit the needs of their students – sometimes students need more time with a concept and at other times, less.

An effective way to use this guide is to review the mathematical concepts to be taught in each Instructional Block. From there, teachers would map out how much time they feel is needed to teach the concepts within the block based on the data of their students' needs. For example, some classes may need more time devoted to developing division concepts, while another class at the same grade level may need more focused time on understanding the functions of fractions within an Instructional Block.

The starting point for instructional planning is the standards. The textbook resources are just the first tools for teachers in helping to build mathematical understanding. Like going to a restaurant specializing in customer service, there may be times one wishes to order "off-the-menu". There are hundreds of resources available, both publisher- and teacher-created, that may be used to best teach a concept or skill. Collaborative planning, both within and among grade levels, is strongly encouraged in order to design effective instructional programs for students.

# Concept Lesson Alignment for the 2012-2013 Mathematics Instructional Guide Instructional Blocks

Grade Level	Name of Lesson	Standard Number and Concept Developed	Instructional Block
3	“The Flower Garden”	NS 3.1: Comparing Fractions	2
	“Elena’s Patterns”	NS 2.4: Multiplication of multi-digit numbers by single-digit numbers	2
	“Measuring Toy Boxes”	MG 1.2: Estimate or determine the volume of solid figures (rectangular prisms)	3
	“It’s Money In the Bank”	NS 3.3: Adding and Subtracting Decimals	3
4	“Cookie Containers”	NS 3.4: Solve problems involving multi-digit numbers by a single-digit number	1
	“Fractions on a Number Line”	NS 1.9: Comparing Fractions Using a Number Line	2
	“Stacking Blocks”	AF 1.5: Find the second value when given first value in a functional relationship, e.g. a linear function MG 2.1: Create a graph representing this linear functional relationship	3
	“Puppy Play Pen”	MG 1.3: Rectangles with the same area can have different perimeters MG 1.4: Use formulas for perimeters and areas of rectangles (including squares)	3
5	“Off to the Races”	NS 1.5: Identify relative position of fractions, mixed numbers, and decimals	2
	“Candy Bar Capers”	NS 2.3: Adding and Subtracting Fractions	2
	“The Game of Chips”	NS 2.1: Add integers	3
	“Earth Day”	AF 1.2: Write and evaluate one-variable equations AF 1.5: Solve problems involving linear functions using graphs and manipulating equations	3

# THIRD GRADE

## ORGANIZED BY STANDARDS 2012-13 MIG Topics and Instructional Components

By the end of grade three, students deepen their understanding of place value and their understanding of and skill with addition, subtraction, multiplication, and division of whole numbers. Students estimate, measure, and describe objects in space. They use patterns to help solve problems. They represent number relationships and conduct simple probability experiments.

**NOTES:** Topic 3 is a review of Second grade standards  
 Topic 6 & 16 include lessons covering Second grade standards  
 Topic 20 include lessons covering Fourth grade standards

CST # of Items	Grade 3 Standard Number	Grade 3 Standard Wording	<u>enVisionMATH</u> TOPIC*	IB 1	IB 2	IB 3	After CST
---	NS 1.0	Students understand the place value of whole numbers:	1	✓			
1/2 **	NS 1.1	Count, read, and write whole numbers to 10,000.	1	✓			
1	NS 1.2	Compare and order whole numbers to 10,000.	1	✓			
3	<del>NS 1.3</del> <b>NS 1.3</b>	<b>Identify the place value for each digit in numbers to 10,000.</b>	1	✓			
1/2 **	NS 1.4	Round off numbers to 10,000 to the nearest ten, hundred, and thousand.	2, 3, 4	✓			
3	<del>NS 1.5</del> <b>NS 1.5</b>	<b>Use expanded notation to represent numbers (e.g., 3,206 = 3,000 + 200 + 6).</b>	1	✓			
---	NS 2.0	Students calculate and solve problems involving addition, subtraction,	3, 4, 6†, 11, 15, 19	✓	✓	✓	

\* based on enVisionMATH Overview and Implementation Guide.

\*\*fractional values indicate rotated standards (e.g., 1/2 = rotated every 2 years; 1/3 = rotated every 3 years).

\*\*\*not assessable in a multiple-choice format

**↔ Bold** standards are essential Key Standards for the grade level. These comprise 70% of the CST.

~~Double lined through~~ are portions of the standard not taught in that topic. Full coverage of the standard will occur in later topics.

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✓ = Instructional Block in which the standard is taught according to LAUSD Mathematics Instructional Guide.

†Topic 9, with the exception of lesson 9-4, covers Second grade standards.

‡Topics 6 and 16 include Second grade standards.

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CST # of Items	Grade 3 Standard Number	Grade 3 Standard Wording	<i>enVisionMATH</i> TOPIC*	IB 1	IB 2	IB 3	After CST
		multiplication, and division:					
4	<b>↔</b> NS 2.1	<b>Find the sum or difference of two whole numbers between 0 and 10,000.</b>	2, 3, 4, 8	✓	✓		
NA***	<b>↔</b> NS 2.2	<b>Memorize to automaticity the multiplication table for numbers between 1 and 10.</b>	7, 8	✓	✓		
3	<b>↔</b> NS 2.3	<b>Use the inverse relationship of multiplication and division to compute and check results.</b>	10, 15		✓	✓	
5	<b>↔</b> NS 2.4	<b>Solve simple problems involving multiplication of multi digit numbers by one-digit numbers (3,671 x 3 = <u>    </u>).</b>	14		✓		
1	NS 2.5	Solve division problems in which a multi digit number is evenly divided by a one-digit number (135 ÷ 5 = <u>    </u> ).	15			✓	
1	NS 2.6	Understand the special properties of 0 and 1 in multiplication and division.	7, 10	✓	✓		
1	NS 2.7	Determine the unit cost when given the total cost and number of units.	19			✓	
1	NS 2.8	Solve problems that require two or more of the skills mentioned above.	7, 8, 16 <sup>‡</sup> , 17	✓	✓	✓	
---	NS 3.0	Students understand the relationship between whole numbers, simple fractions, and decimals:	12		✓		
1	NS 3.1	Compare fractions represented by drawings or concrete materials to show equivalency and to add and subtract simple fractions in context (e.g., 1/2 of a pizza is the same amount as 2/4 of another pizza that is the same size; show that 3/8 is larger than 1/4).	12, 13		✓		
2	<b>↔</b> NS 3.2	<b>Add and subtract simple fractions (e.g., determine that 1/8 + 3/8 is</b>	13		✓		

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		the same as 1/2).					
4	<b>↔</b> NS 3.3	<b>Solve problems involving addition, subtraction, multiplication, and division of money amounts in decimal notation and multiply and divide money amounts in decimal notation by using whole-number multipliers and divisors.</b>	19			✓	
1	NS 3.4	Know and understand that fractions and decimals are two different representations of the same concept (e.g., 50 cents is 1/2 of a dollar, 75 cents is 3/4 of a dollar).	19			✓	
---	AF 1.0	Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number relationships:	7, 11, 16‡		✓	✓	
4	<b>↔</b> AF 1.1	<b>Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.</b>	11		✓		
1	AF 1.2	Solve problems involving numeric equations or inequalities.	1, 6‡				
1	AF 1.3	Select appropriate operational and relational symbols to make an expression true (e.g., if $4 \_ 3 = 12$ , what operational symbol goes in the blank?).	6‡, 7, 11		✓		
1	AF 1.4	Express simple unit conversions in symbolic form (e.g., $\_ \text{ inches} = \_ \text{ feet} \times 12$ ).	16‡, 17			✓	
1	AF 1.5	Recognize and use the commutative and associative properties of multiplication (e.g., if $5 \times 7 = 35$ , then what is $7 \times 5$ ? and if $5 \times 7 \times 3 = 105$ , then what is $7 \times 3 \times 5$ ?).	6‡, 8		✓		
---	AF 2.0	Students represent simple functional relationships:	12, 17		✓		

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CST # of Items	Grade 3 Standard Number	Grade 3 Standard Wording	<i>enVisionMATH</i> TOPIC*	IB 1	IB 2	IB 3	After CST
3	<b>↔AF 2.1</b>	<b>Solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit).</b>	6‡, 11, 17		✓		
1	AF 2.2	Extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4s or by multiplying the number of horses by 4).	11		✓		
---	MG 1.0	Students choose and use appropriate units and measurement tools to quantify the properties of objects:	16‡			✓	
1	MG 1.1	Choose the appropriate tools and units (metric and U.S.) and estimate and measure the length, liquid volume, and weight/mass of given objects.	16‡, 17			✓	
3	<b>↔MG 1.2</b>	<b>Estimate or determine the area and volume of solid figures by covering them with squares or by counting the number of cubes that would fill them.</b>	18			✓	
3	<b>↔MG 1.3</b>	<b>Find the perimeter of a polygon with integer sides.</b>	18			✓	
1	MG 1.4	Carry out simple unit conversions within a system of measurement (e.g., centimeters and meters, hours and minutes).	16‡, 17			✓	
---	MG 2.0	Students describe and compare the attributes of plane and solid geometric figures and use their understanding to show relationships and solve problems:	5, 9†	✓	✓		
2	<b>↔MG 2.1</b>	<b>Identify, describe, and classify polygons (including pentagons, hexagons, and octagons).</b>	5	✓			

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CST # of Items	Grade 3 Standard Number	Grade 3 Standard Wording	<i>enVisionMATH</i> TOPIC*	IB 1	IB 2	IB 3	After CST
2	↔MG 2.2	<b>Identify attributes of triangles (e.g., two equal sides for the isosceles triangle, three equal sides for the equilateral triangle, right angle for the right triangle).</b>	5	✓			
2	↔MG 2.3	<b>Identify attributes of quadrilaterals (e.g., parallel sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square).</b>	5, 18	✓		✓	
2/3 **	MG 2.4	Identify right angles in geometric figures or in appropriate objects and determine whether other angles are greater or less than a right angle.	5	✓			
2/3 **	MG 2.5	Identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, cylinder).	5	✓			
2/3 **	MG 2.6	Identify common solid objects that are the components needed to make a more complex solid object.	5	✓			
---	SDAP 1.0	Students conduct simple probability experiments by determining the number of possible outcomes and make simple predictions:	20⊕			✓	
1	SDAP 1.1	Identify whether common events are certain, likely, unlikely, or improbable.	20⊕			✓	
2	↔SDAP 1.2	<b>Record the possible outcomes for a simple event (e.g., tossing a coin) and systematically keep track of the outcomes when the event is repeated many times.</b>	20⊕			✓	
2	↔SDAP 1.3	<b>Summarize and display the results of probability experiments in a clear and organized way (e.g., use a bar graph or a line plot).</b>	20⊕			✓	

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NA***	SDAP 1.4	Use the results of probability experiments to predict future events (e.g., use a line plot to predict the temperature forecast for the next day).	20⊕			✓	

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# THIRD GRADE

## ORGANIZED BY INSTRUCTIONAL BLOCK

Revision for 2012-13 MIG Topics and Instructional Components

By the end of grade three, students deepen their understanding of place value and their understanding of and skill with addition, subtraction, multiplication, and division of whole numbers. Students estimate, measure, and describe objects in space. They use patterns to help solve problems. They represent number relationships and conduct simple probability experiments.

**NOTES:** Topic 3 is a review of Second grade standards  
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CST # of Items	Grade 3 Standard Number	Grade 3 Standard Wording	<u>enVisionMATH</u> TOPIC*	IB 1	IB 2	IB 3	After CST
---	NS 1.0	Students understand the place value of whole numbers:	1	✓			
1/2**	NS 1.1	Count, read, and write whole numbers to 10,000.	1	✓			
1	NS 1.2	Compare and order whole numbers to 10,000.	1	✓			
3	<b>↔NS 1.3</b>	<b>Identify the place value for each digit in numbers to 10,000.</b>	1	✓			
3	<b>↔NS 1.5</b>	<b>Use expanded notation to represent numbers (e.g., 3,206 = 3,000 + 200 + 6).</b>	1	✓			
1	AF 1.2	Solve problems involving numeric equations or inequalities.	1	✓			
1/2**	NS 1.4	Round off numbers to 10,000 to the nearest ten, hundred, and	2	✓			

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CST # of Items	Grade 3 Standard Number	Grade 3 Standard Wording	<i>enVision</i> MATH TOPIC*	IB 1	IB 2	IB 3	After CST
		thousand.					
4	<del>↔</del> NS 2.1	<del>Find the sum or difference of two whole numbers between 0 and 10,000.</del>	2	✓			
1/2**	NS 1.4	Round off numbers to 10,000 to the nearest ten, hundred, and thousand.	3	✓			
---	NS 2.0	Students calculate and solve problems involving addition, <del>subtraction, multiplication, and division.</del>	3	✓			
4	<del>↔</del> NS 2.1	<del>Find the sum or difference of two whole numbers between 0 and 10,000.</del>	3	✓			
1/2**	NS 1.4	Round off numbers to 10,000 to the nearest ten, hundred, and thousand.	4	✓			
---	NS 2.0	Students calculate and solve problems involving addition, subtraction, <del>multiplication, and division.</del>	4	✓			
4	<del>↔</del> NS 2.1	<del>Find the sum or difference of two whole numbers between 0 and 10,000.</del>	4	✓			
---	MG 2.0	Students describe and compare the attributes of plane and solid geometric figures and use their understanding to show relationships and solve problems:	5	✓			
2	<del>↔</del> MG 2.1	<del>Identify, describe, and classify polygons (including pentagons, hexagons, and octagons).</del>	5	✓			
2	<del>↔</del> MG 2.2	<del>Identify attributes of triangles (e.g., two equal sides for the</del>	5	✓			

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		<b>isosceles triangle, three equal sides for the equilateral triangle, right angle for the right triangle).</b>					
2	<b>↔</b> MG 2.3	<b>Identify attributes of quadrilaterals (e.g., parallel sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square).</b>	5	✓			
2/3**	MG 2.4	Identify right angles in geometric figures or in appropriate objects and determine whether other angles are greater or less than a right angle.	5	✓			
2/3**	MG 2.5	Identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, cylinder).	5	✓			
2/3**	MG 2.6	Identify common solid objects that are the components needed to make a more complex solid object.	5	✓			
---	NS 2.0	Students calculate and solve problems involving addition, <del>subtraction,</del> multiplication, <del>and division.</del>	6‡	✓			
1	AF 1.2	Solve problems involving numeric equations or inequalities.	6‡	✓			
1	AF 1.3	Select appropriate operational and relational symbols to make an expression true (e.g., if $4 \_ 3 = 12$ , what operational symbol goes in the blank?).	6‡	✓			
1	AF 1.5	Recognize and use the commutative <del>and associative</del> properties of multiplication (e.g., if $5 \times 7 = 35$ , then what is $7 \times 5$ ? <del>and if <math>5 \times 7 = 35</math>, then what is <math>7 \times 3 \times 5</math>?</del> ).	6‡	✓			
3	<b>↔</b> AF 2.1	<b>Solve simple problems involving a functional relationship between</b>	6‡	✓			

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# THIRD GRADE

CST # of Items	Grade 3 Standard Number	Grade 3 Standard Wording	<i>enVision</i> MATH TOPIC*	IB 1	IB 2	IB 3	After CST
		<b>two quantities (e.g., find the total cost of multiple items given the cost per unit).</b>					
NA***	<del>↔</del> NS 2.2	<b>Memorize to automaticity the multiplication table for numbers between 1 and 10. 0, 1, 2, 5, 9, and 10</b>	7	✓			
1	NS 2.6	Understand the special properties of 0 and 1 in multiplication <del>and</del> division.	7	✓			
1	NS 2.8	Solve problems that require two or more of the skills mentioned above.	7	✓			
---	AF 1.0	Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number relationships:	7	✓			
1	AF 1.3	Select appropriate operational and relational symbols to make an expression true (e.g., if $4 \_ 3 = 12$ , what operational symbol goes in the blank?).	7	✓			
4	<del>↔</del> NS 2.1	<b>Find the sum or difference of two whole numbers between 0 and 10,000.</b>	8		✓		
NA***	<del>↔</del> NS 2.2	<b>Memorize to automaticity the multiplication table for numbers between 1 and 10.</b>	8		✓		
1	NS 2.8	Solve problems that require two or more of the skills mentioned above.	8		✓		
1	AF 1.5	Recognize and use the commutative and associative properties of multiplication (e.g., if $5 \times 7 = 35$ , then what is $7 \times 5$ ? and if $5 \times 7 \times 3$	8		✓		

\* based on *enVision*MATH Overview and Implementation Guide.

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		= 105, then what is $7 \times 3 \times 5$ ?).					
---	MG 2.0	Students describe and compare the attributes of plane and solid geometric figures and use their understanding to show relationships and solve problems:	9†		✓		
3	<del>NS 2.3</del>	<b>Use the inverse relationship of multiplication and division to compute and check results.</b>	10		✓		
1	NS 2.6	Understand the special properties of 0 and 1 in multiplication and division.	10		✓		
---	NS 2.0	Students calculate and solve problems involving addition, subtraction, multiplication, and division:	11		✓		
---	AF 1.0	Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number relationships:	11		✓		
4	<del>AF 1.1</del>	<b>Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.</b>	11		✓		
1	AF 1.3	Select appropriate operational and relational symbols to make an expression true (e.g., if $4 \_ 3 = 12$ , what operational symbol goes in the blank?).	11		✓		
3	<del>AF 2.1</del>	<b>Solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit).</b>	11		✓		
1	AF 2.2	Extend and recognize a linear pattern by its rules (e.g., the number of	11		✓		

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		legs on a given number of horses may be calculated by counting by 4s or by multiplying the number of horses by 4).					
---	NS 3.0	Students understand the relationship between whole numbers, simple fractions, and decimals:	12		✓		
1	NS 3.1	Compare fractions represented by drawings or concrete materials to show equivalency and to add and subtract simple fractions in context (e.g., 1/2 of a pizza is the same amount as 2/4 of another pizza that is the same size; show that 3/8 is larger than 1/4).	12		✓		
---	AF 2.0	Students represent simple functional relationships:	12		✓		
1	NS 3.1	Compare fractions represented by drawings or concrete materials to show equivalency and to add and subtract simple fractions in context (e.g., 1/2 of a pizza is the same amount as 2/4 of another pizza that is the same size; show that 3/8 is larger than 1/4).	13		✓		
2	<b>↔</b> NS 3.2	<b>Add and subtract simple fractions (e.g., determine that <math>1/8 + 3/8</math> is the same as <math>1/2</math>).</b>	13		✓		
5	<b>↔</b> NS 2.4	<b>Solve simple problems involving multiplication of multi digit numbers by one-digit numbers (<math>3,671 \times 3 = \underline{\quad}</math>).</b>	14		✓		
---	NS 2.0	Students calculate and solve problems involving addition, subtraction, multiplication, and division:	15			✓	
3	<b>↔</b> NS 2.3	<b>Use the inverse relationship of multiplication and division to compute and check results.</b>	15			✓	

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1	NS 2.5	Solve division problems in which a multi digit number is evenly divided by a one-digit number ( $135 \div 5 = \underline{\quad}$ ).	15			✓	
1	NS 2.8	Solve problems that require two or more of the skills mentioned above.	16‡			✓	
---	AF 1.0	Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number relationships:	16‡			✓	
1	AF 1.4	Express simple unit conversions in symbolic form (e.g., $\underline{\quad}$ inches = $\underline{\quad}$ feet x 12).	16‡			✓	
---	MG 1.0	Students choose and use appropriate units and measurement tools to quantify the properties of objects:	16‡			✓	
1	MG 1.1	Choose the appropriate tools and units ( <del>metric and</del> U.S.) and estimate and measure the length, liquid volume, and weight/mass of given objects.	16‡			✓	
1	MG 1.4	Carry out simple unit conversions within a system of measurement (e.g., <del>centimeters and meters</del> , hours and minutes).	16‡			✓	
1	NS 2.8	Solve problems that require two or more of the skills mentioned above.	17			✓	
1	AF 1.4	Express simple unit conversions in symbolic form (e.g., $\underline{\quad}$ inches = $\underline{\quad}$ feet x 12).	17			✓	
---	AF 2.0	Students represent simple functional relationships:	17			✓	
3	<b>→ AF 2.1</b>	<b>Solve simple problems involving a functional relationship between</b>	17			✓	

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		<b>two quantities (e.g., find the total cost of multiple items given the cost per unit).</b>					
1	MG 1.1	Choose the appropriate tools and units (metric and U.S.) and estimate and measure the length, liquid volume, and weight/mass of given objects.	17			✓	
1	MG 1.4	Carry out simple unit conversions within a system of measurement (e.g., centimeters and meters, hours and minutes).	17			✓	
3	<del>↔</del> MG 1.2	<b>Estimate or determine the area and volume of solid figures by covering them with squares or by counting the number of cubes that would fill them.</b>	18			✓	
3	<del>↔</del> MG 1.3	<b>Find the perimeter of a polygon with integer sides.</b>	18			✓	
2	<del>↔</del> MG 2.3	<b>Identify attributes of quadrilaterals (e.g., parallel sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square).</b>	18			✓	
---	NS 2.0	Students calculate and solve problems involving addition, subtraction, multiplication, and division:	19			✓	
1	NS 2.7	Determine the unit cost when given the total cost and number of units.	19			✓	
4	<del>↔</del> NS 3.3	<b>Solve problems involving addition, subtraction, multiplication, and division of money amounts in decimal notation and multiply and divide money amounts in decimal notation by using whole-number multipliers and divisors.</b>	19			✓	

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1	NS 3.4	Know and understand that fractions and decimals are two different representations of the same concept (e.g., 50 cents is 1/2 of a dollar, 75 cents is 3/4 of a dollar).	19			✓	
---	SDAP 1.0	Students conduct simple probability experiments by determining the number of possible outcomes and make simple predictions:	20⊕			✓	
1	SDAP 1.1	Identify whether common events are certain, likely, unlikely, or improbable.	20⊕			✓	
2	<b>↔SDAP 1.2</b>	<b>Record the possible outcomes for a simple event (e.g., tossing a coin) and systematically keep track of the outcomes when the event is repeated many times.</b>	20⊕			✓	
2	<b>↔SDAP 1.3</b>	<b>Summarize and display the results of probability experiments in a clear and organized way (e.g., use a bar graph or a line plot).</b>	20⊕			✓	
NA***	SDAP 1.4	Use the results of probability experiments to predict future events (e.g., use a line plot to predict the temperature forecast for the next day).	20⊕			✓	

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