i-Ready Personalized Instruction: Mathematics Lessons for Grades K–8

The learning progression of *I-Ready Personalized Instruction* is grounded in research and evidence about the important grade-level skills to develop, as well as the logical sequence in which to teach them.

Within each mathematics domain, grade-level expectations are articulated, and lessons are organized in a clear, systematic scope and sequence. We designed the progression of this sequence to reflect research and expert opinion about effective continuous instruction. The lessons are sequenced to build on students' background knowledge, respond to students' actions and abilities, and gradually enhance students' mathematics competency.

Each lesson focuses on a single target skill—a key building block that the student needs in that domain—to achieve grade-level proficiency, and lesson objectives clearly state skill expectations. All lessons feature systematic, sequential instruction, guided practice, and a short quiz for progress-monitoring purposes. Student performance within the lesson determines which skills a student understands, and which they are ready to work on next.

The instruction given in many domains is responsive, rather than "one size fits all." This means that when students answer questions incorrectly, they are presented with instructional feedback that guides them toward understanding. But if students answer questions correctly, they are allowed to advance without listening to instruction they do not need. This approach allows each student to receive the right amount of challenge and progress at an appropriate pace through the lessons themselves, and through the lesson pathway.

Should the teacher feel that a student needs further challenge, they can opt to add teacher-assigned lessons to the student's automatically assigned instructional path or adjust a student's position within the recommended lessons sequence.

The table below shows the Scope and Sequence of *i-Ready Personalized Instruction* lessons that show coherence of the key concepts and alignment to the TEKS.

Table. 1 *i-Ready Personalized Instruction:* Mathematics Lessons for Grades K–8

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
1	K	NO	Early	Count up to 3 Objects	Develop familiarity with numerals 1, 2, and 3. Tell how many objects are in a given set of up to 3 objects.
2	K	NO	Early	Count up to 5 Objects	Develop familiarity with numerals 1–5. Tell how many objects are in a given set of up to 5 objects.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
3	K	NO	Early	Count up to 10 Objects in Rows or Arrays	Count groups of up to 10 objects arranged in a row or anarray and tell how many there are in all. Develop familiarity with numerals 6–10.
4	K	NO	Early	Practice: Count up to 10 Objects in Rows or Arrays	Count groups of 6–10 objects arranged in a row or an array and tell how many there are in all. Develop familiarity with numerals 6–10.
5	K	NO	Early	Count up to 10 Objects in Different Arrangements	Count groups of 6–10 objects arranged in circular or scattered configurations and tell how many there are in all. Develop familiarity with numerals up to 10.
6	K	NO	Early	Practice: Count up to 10 Objects, Part 1	Count groups of 6–10 objects arranged in circular or scattered configurations and tell how many there are in all. Develop familiarity with numerals 6–10.
7	K	NO	Early	Practice: Count up to 10 Objects, Part 2	Count groups of up to 10 objects and tell how many there are in all. Develop familiarity with numerals up to 10.
8	K	NO	Mid	Make Groups of up to 10 Objects	Given a number from 2 to 10, count out that many objects.
9	K	NO	Mid	Practice: Count and Make Groups to 10, Part 1	Count groups of up to 10 objects. Make groups of up to 10 objects.
10	K	NO	Mid	Order Numbers to 10	Count forward starting at a number other than 1 (within 10).
11	K	NO	Mid	More	Compare two groups of objects and identify which group has more.
12	K	NO	Mid	Find One More	Find the number that is 1 more than the number of objects in a group. Understand that each successive number name refers to a quantity that is 1 larger.
13	K	NO	Mid	Less	Compare two groups of objects and identify which group has less.
14	K	NO	Mid	Compare Numbers Within 10	Identify whether the number of objects in one group is morethan, less than, or the same number of objects in another group.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Given two numbers written as numerals, identify whether one is more, less, or the same as another.
15	K	AL	Mid	Understand Addition	Understand addition as adding to a set of objects.
16	K	AL	Mid	Add Within 5	Add within 5 using pictures or fingers.
17	K	AL	Mid	Understand Subtraction	Understand subtraction as taking away from a set of objects. Describe subtraction situations using mathematical languageand numerical expressions.
18	K	AL	Mid	Subtract Within 5	Subtract within 5 using pictures.
19	K	AL	Mid	Practice: Add and Subtract Within 5	Add within 5 using pictures or fingers. Subtract within 5 using pictures.
20	K	AL	Mid	Number Partners for 3	Decompose numbers less than or equal to 5 into pairs in morethan one way using objects or drawings. Record decomposition as addition using drawings and equations.
21	K	AL	Mid	Number Partners for 4 and 5	Decompose the numbers 4 and 5 into pairs in more than oneway using objects or drawings. Record decomposition as addition using drawings and equations.
22	K	AL	Mid	Add Within 10	Add within 10 using pictures or fingers.
23	K	AL	Mid	Subtract Within 10	Subtract within 10 using pictures.
24	K	AL	Mid	Practice: Add and Subtract Within 10, Part 1	Add within 10 using pictures or fingers. Subtract within 10 using pictures.
25	K	AL	Mid	Number Partners for 6 and 7	Decompose the numbers 6 and 7 into pairs in more than oneway using objects or drawings. Record decomposition as addition using drawings and equations.
26	K	AL	Mid	Number Partners for 8 and 9	Decompose the numbers 8 and 9 into pairs in more than oneway using objects or drawings. Record decomposition as addition using drawings and equations.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
27	K	AL	Mid	Number Partners for 10	Decompose the number 10 into pairs in more than one wayusing objects or drawings. Record decomposition as addition using drawings and equations.
28	K	NO	Late	Practice: Count and Make Groups to 10, Part 2	Count groups of up to 10 objects. Make groups of up to 10 objects.
29	K	NO	Late	Count up to 20 Objects	Count groups of up to 20 objects. Develop familiarity with numerals 11–20.
30	K	NO	Late	Practice: Count up to 20 Objects	Count groups of up to 20 objects. Develop familiarity with numerals 11–20.
31	K	NO	Late	Make Groups of up to 20 Objects	Given a number from 11 to 20, count out that many objects.
32	K	NO	Late	Practice: Make Groups of up to 20 Objects	Make groups of 11–20 objects.
33	K	NO	Late	Order Numbers to 20	Count forward starting at a number other than 1 (within 11–20).
34	K	NO	Late	Explore Teen Numbers	Decompose numbers from 11 to 19. Compose numbers from 11 to 19.
35	K	AL	Late	Practice: Add and Subtract Within 10, Part 2	Add within 10 using pictures or fingers. Subtract within 10 using pictures.
36	K	AL	Late	Fluently Add and Subtract Within 5	Develop fluency with addition facts to 5. Develop fluency with subtraction facts to 5.
37	K	AL	Late	Make 10	For any number from 1 to 9, find the number that can be added to make 10. Record each composition as addition, using drawings and equations.
38	K	AL	Late	Practice: Make 10	For any number from 1 to 9, find the number that can be added to make 10.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Record each composition as addition, using drawings and equations.
39	K	MS	Early	Different	Given a set of objects, students identify an object that is different.
40	K	MS	Early	Same	Given a set of objects, students identify an object that is the same.
41	K	MS	Early	Longer or Shorter	Compare two objects to find which is longer or shorter. Compare two objects to find which is longer or shorter than a third reference object.
42	K	MS	Early	Taller or Shorter	Compare two objects to find which is taller or shorter. Compare two objects to find which is taller or shorter than a third reference object.
43	K	MS	Early	Lighter or Heavier	Compare two objects to find which is lighter or heavier. Compare two objects to find which is lighter or heavier than a third reference object.
44	K	MS	Early	Holds More or Less	Compare two objects to find which holds more or holds less. Compare two objects to find which holds more or holds less than a third reference object.
45	K	MS	Late	Sort Objects	Sort objects into given categories. Count the number of objects in each category. Compare the number of objects in each category.
46	K	MS	Late	Practice: Sort Objects	Sort objects into given categories. Count the number of objects in each category. Compare the number of objects in each category.
47	K	GEO	Early	Cube	Identify cubes.
48	K	GEO	Early	Sphere	Identify spheres.
49	K	GEO	Early	Circle	Identify circles.
50	K	GEO	Early	Square	Identify squares.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
51	K	GEO	Early	Triangle	Identify triangles.
52	K	GEO	Mid	Identify Two-Dimensional Shapes	Identify shapes as two-dimensional (flat) or three-dimensional (solid). Identify squares, circles, triangles, rectangles, and hexagons.
53	K	GEO	Mid	Practice: Identify Two-Dimensional Shapes	Identify shapes as two-dimensional (flat) or three-dimensional (solid). Identify squares, circles, triangles, rectangles, hexagons.
54	1	AL	Early	Practice: Add and Subtract Within 10	Add within 10 using pictures or fingers. Subtract within 10 using pictures.
55	1	AL	Early	"Add To" and "Put Together" Word Problems	Solve word problems involving "add to" and "put together" situations with the result or total unknown. Use objects, pictures, and equations to represent word problems.
56	1	AL	Early	Add in Any Order	Understand that two numbers may be added in either order and will result in the same sum.
57	1	AL	Early	Count On to Add	Relate addition by counting to addition. Count on to add within 15. Apply the Commutative Property to count on the smaller of two addends.
58	1	AL	Early	Practice: Count On to Add	Relate addition by counting to addition. Count on to add within 15. Apply the Commutative Property to count on the smaller of two addends.
59	1	AL	Early	"Add To Change Unknown" Word Problems	Solve word problems involving "add to" situations with the change unknown. Use objects, pictures, and equations to represent word problems.
60	1	AL	Early	Practice: "Add To" Word Problems	Solve word problems involving "add to" situations with the change or result unknown. Use objects, pictures, and equations to represent word problems.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
61	1	AL	Early	Use Addition to Subtract	Understand how addition and subtraction sentences relate to a total made up of two parts. Subtract by thinking addition.
62	1	AL	Early	Count On to Subtract	Apply the counting on strategy to subtract within 15.
63	1	AL	Early	"Take From" Word Problems	Solve word problems involving "take from" situations with the result unknown. Use objects, pictures, and equations to represent word problems.
64	1	AL	Early	"Take From Change Unknown" Word Problems	Solve word problems involving "take from" situations with the change unknown. Use objects, pictures, and equations to represent word problems.
65	1	AL	Early	Practice: "Change Unknown" Word Problems	Solve word problems involving "take from" and "add to" situations with the change unknown. Use objects, pictures, and equations to represent word problems.
66	1	AL	Early	Doubles	Recognize doubles as adding two of the same number. Find sums of doubles.
67	1	AL	Early	Doubles and Near Doubles	Add two numbers by finding an equivalent sum that uses a double.
68	1	AL	Early	"Put Together/Take Apart Addend Unknown" Problems	Solve word problems involving "put together/take apart" situations with one addend unknown. Use objects, pictures, and equations to represent word problems.
69	1	AL	Early	Practice: "Put Together/Take Apart" Word Problems	Solve word problems involving "put together/take apart" situations with one addend or the total unknown. Use objects, pictures, and equations to represent word problems.
70	1	NO	Mid	Practice: Order Numbers 1 to 20	Count forward starting at a number other than 1 (up to 20).
71	1	NO	Mid	Order Numbers to 120	Count forward in a given sequence, up to 120.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Order a given group of numbers up to 120 (counting by one).
72	1	NO	Mid	Practice: Order Numbers to 120	Count forward in a given sequence, up to 120. Order a given group of numbers up to 120 (counting by one).
73	1	NO	Mid	Identify Teen Numbers	Understand that a ten is a unit made up of ten ones. Identify teen numbers that are represented visually as a ten and some ones.
74	1	NO	Mid	Practice: Identify Teen Numbers	Understand that a ten is a unit made up of ten ones. Identify teen numbers that are represented visually as a ten and some ones.
75	1	NO	Mid	Build Teen Numbers	Understand that a ten is a unit made up of ten ones. Build teen numbers by representing them as a ten and some ones.
76	1	NO	Mid	Practice: Build Teen Numbers	Understand that a ten is a unit made up of ten ones. Build teen numbers by representing them as a ten and some ones.
77	1	NO	Mid	Identify Two-Digit Numbers	Identify decade numbers that are represented visually as one, two, three, four, five, six, seven, eight, or nine tens. Identify two-digit numbers that are represented visually as tens and ones.
78	1	NO	Mid	Practice: Identify Two-Digit Numbers	Identify decade numbers that are represented as one, two, three, four, five, six, seven, eight, or nine tens. Identify two-digit numbers that are represented as tens and ones.
79	1	NO	Mid	Build Two-Digit Numbers	Understand that the first digit of a two-digit number represents the number of tens and the second digit represents the number of ones. Build two-digit numbers by representing them as groups of tens and ones.
80	1	NO	Mid	Practice: Build Two-Digit Numbers	Understand that the first digit of a two-digit number represents the number of tens and the second digit represents the number of ones.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Build two-digit numbers by representing them as groups of tens and ones.
81	1	AL	Mid	"Compare Difference Unknown" Word Problems	Solve word problems involving comparison situations with the difference unknown. Use objects, pictures, and equations to represent word problems.
82	1	AL	Mid	Practice: "Compare Difference Unknown" Problems	Solve word problems involving comparison situations with the difference unknown. Use objects, pictures, and equations to represent word problems.
83	1	AL	Mid	"Compare Bigger Unknown" Word Problems	Solve word problems involving comparison situations in which the greater quantity is unknown, and the term “more” is used. Use objects, pictures, and equations to represent word problems.
84	1	AL	Mid	Practice: Comparison Word Problems	Solve word problems involving comparison situations with the greater quantity unknown or the difference unknown. Use objects, pictures, and equations to represent word problems.
85	1	AL	Mid	"Compare Smaller Unknown" Word Problems	Solve word problems involving comparison situations in which the lesser quantity is unknown and the term “fewer” is used. Use objects, pictures, and equations to represent word problems.
86	1	AL	Mid	Practice: More Comparison Word Problems	Solve word problems involving comparison situations with the lesser quantity unknown or the greater quantity unknown. Use objects, pictures, and equations to represent word problems.
87	1	AL	Mid	Practice: Make a Ten	For any number from 1 to 9, find the number that can be added to make 10. Record each composition as addition, using drawings and equations.
88	1	AL	Mid	Make a Ten to Add	Understand the rationale for decomposing a number to make ten when adding. Add by making a ten.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
89	1	AL	Mid	Practice: Make a Ten to Add	Understand the rationale for decomposing a number to make ten when adding. Add by making a ten.
90	1	AL	Mid	Add Three Numbers in Word Problems	Solve word problems involving the sum of three addends. Use objects, pictures, and equations to represent word problems.
91	1	AL	Mid	Make a Ten to Subtract	Understand the rationale for decomposing a number to make ten when subtracting. Subtract by decomposing a number leading to a ten.
92	1	AL	Mid	Practice: Make a Ten to Subtract	Understand the rationale for decomposing a number to make ten when subtracting. Subtract by decomposing a number leading to a ten.
93	1	AL	Mid	Practice: Number Partners for 10	Decompose the number 10 into pairs in more than one way by using objects or drawings. Record decomposition as addition using drawings and equations.
94	1	AL	Mid	Fluently Add and Subtract Within 10	Develop fluency with addition facts to 10. Develop fluency with subtraction facts to 10.
95	1	NO	Late	Add Multiples of Ten to Multiples of Ten	Add multiples of 10 to multiples of 10 with totals to 100.
96	1	NO	Late	Practice: Add Multiples of Ten	Add multiples of 10 to multiples of 10 with totals to 100.
97	1	NO	Late	Subtract Multiples of Ten from Multiples of Ten	Subtract a multiple of 10 from a multiple of 10 in the range 10–90.
98	1	NO	Late	Practice: Subtract Multiples of Ten	Subtract a multiple of 10 from a multiple of 10 in the range 10–90.
99	1	NO	Late	Add Multiples of Ten to Any Two-Digit Number	Add a multiple of 10 to any two-digit number.
100	1	NO	Late	Practice: Add Multiples of 10 to Two-Digit Numbers	Add a multiple of 10 to any two-digit number (within 100).
101	1	NO	Late	Add Two-Digit and One-Digit Numbers	Add a two-digit number and a one-digit number, regrouping as needed (sums within 40).

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
102	1	NO	Late	Practice: Add Two-Digit and One-Digit Numbers	Add a two-digit and a one-digit number, regrouping as needed (sums within 40).
103	1	NO	Late	Add More Two-Digit and One-Digit Numbers	Add a two-digit number and a one-digit number, regrouping as needed (sums within 100).
104	1	NO	Late	Practice: Add More Two-Digit and One-Digit Numbers	Add a two-digit and a one-digit number, regrouping as needed (sums within 100).
105	1	NO	Late	Add Two-Digit Numbers	Use models to add two-digit numbers, regrouping as needed (sums within 50).
106	1	NO	Late	Practice: Add Two-Digit Numbers	Use models to add two-digit numbers, regrouping as needed (sums within 50).
107	1	NO	Late	Add More Two-Digit Numbers	Use models to add two-digit numbers, regrouping as needed (sums within 100).
108	1	NO	Late	Practice: Add More Two-Digit Numbers	Use models to add two-digit numbers, regrouping as needed (sums within 100).
109	1	AL	Late	"Add To Start Unknown" Word Problems	Solve word problems involving "add to" situations with the start unknown. Use objects, pictures, and equations to represent word problems.
110	1	AL	Late	"Take From Start Unknown" Word Problems	Solve word problems involving "take from" situations with the start unknown. Use objects, pictures, and equations to represent word problems.
111	1	AL	Late	More "Compare Bigger Unknown" Word Problems	Solve word problems involving comparison situations in which the greater quantity is unknown and the term “fewer” is used. Use objects, pictures, and equations to represent word problems.
112	1	AL	Late	More "Compare Smaller Unknown" Word Problems	Solve word problems involving comparison situations in which the lesser quantity is unknown and the term “more” is used. Use objects, pictures, and equations to represent word problems.
113	1	MS	Late	Measure Lengths	Understand that the length measurement of an object is the number of same-size units that span it with no gaps or overlaps.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Measure the length of an object by iterating length units from end to end and counting the number of units used.
114	1	GEO	Mid	Understand Attributes of Shapes	Use defining attributes to describe, compare, sort, and identify shapes. Distinguish between defining and non-defining attributes of two-dimensional shapes.
115	1	GEO	Mid	Practice: Attributes of Shapes	Use defining attributes to describe, compare, sort, and identify shapes. Distinguish between defining and non-defining attributes of two-dimensional shapes.
116	1	GEO	Late	Divide Shapes into Two Equal Parts	Divide circles and rectangles into two equal parts and name the parts as halves. Describe one whole as two halves.
117	1	GEO	Late	Divide Shapes into Four Equal Parts	Divide circles and rectangles into four equal parts and name the parts fourths, and quarters. Describe one whole as four fourths, or four quarters. Understand that the more equal parts a shape is divided into, the smaller each part is.
118	1	GEO	Late	Practice: Identify Two or Four Equal Parts	Describe an equal share using language such as one half, one third, or one fourth. Describe one whole as two halves, three thirds, or four fourths. Understand that the more equal parts a shape is divided into, the smaller each part is.
119	2	AL	Early	Practice: Add Within 10	Add within 10. For any number from 1 to 9, find the number that can be added to make 10.
120	2	AL	Early	"Add To" Word Problems Within 10	Solve word problems within 10 that involve "add to" situations with the result or change unknown. Use objects, pictures, and equations to represent word problems.
121	2	AL	Early	Use Mental Math to Add (Make a Ten), Part 1	Mentally use the make a ten strategy to add within 20.
122	2	AL	Early	Use Mental Math to Add (Make a Ten), Part 2	Apply the commutative property to add in any order. Mentally use the make a ten strategy to add within 20.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
123	2	AL	Early	Practice: Use Mental Math to Add (Make a Ten)	Apply the commutative property to add in any order. Mentally use the make a ten strategy to add within 20.
124	2	AL	Early	"Add To Start Unknown" Word Problems Within 20	Solve word problems within 20 that involve "add to" situations with the start unknown. Use objects, pictures, and equations to represent word problems.
125	2	AL	Early	Use Mental Math to Add (Near Doubles)	Mentally use the near doubles strategy to add within 20.
126	2	AL	Early	Use Mental Math Strategies to Add	Use a variety of mental strategies to add within 20.
127	2	AL	Early	Practice: Use Mental Math Strategies to Add	Use a variety of mental strategies to add within 20. Mentally use the near doubles strategy to add within 20.
128	2	AL	Early	"Take From Start Unknown" Word Problems Within 20	Solve word problems within 20 that involve "take from" situations with the start unknown. Use objects, pictures, and equations to represent word problems.
129	2	AL	Early	Think Addition to Subtract	Mentally use the relationship between addition and subtraction to subtract within 20.
130	2	AL	Early	Think Addition to Subtract (Make a Ten)	Mentally apply the make a ten strategy to subtract by thinking of subtraction problems as unknown addend problems.
131	2	AL	Early	Practice: Think Addition to Subtract	Mentally apply the make a ten strategy to subtract by thinking of subtraction problems as unknown addend problems.
132	2	AL	Early	“Compare Bigger Unknown” Word Problems Within 20	Solve word problems within 20 that involve comparison situations in which the greater quantity is unknown and the terms “more” and “fewer” are used. Use pictures and equations to represent word problems.
133	2	AL	Early	“Compare Smaller Unknown” Word Problems Within 20	Solve word problems within 20 that involve comparison situations in which the lesser quantity is unknown and the terms “more” and “fewer” are used. Use pictures and equations to represent word problems.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
134	2	NO	Mid	Add by Breaking Apart Two-Digit Numbers	Add two-digit numbers by decomposing addends into tens and ones.
135	2	NO	Mid	Practice: Add by Breaking Apart Two-Digit Numbers	Add two-digit numbers by decomposing addends into tens and ones.
136	2	NO	Mid	Add Within 100 on Number Lines, Part 1	Add two-digit numbers by decomposing one addend into tens and ones and adding up on a number line.
137	2	NO	Mid	Practice: Add Within 100 on Number Lines, Part 1	Add two-digit numbers by decomposing addends into tens and ones.
138	2	NO	Mid	Add Within 100 on Number Lines, Part 2	Add two-digit numbers by decomposing one addend to go to the next ten and adding up on a number line.
139	2	NO	Mid	Practice: Add Within 100 on Number Lines, Part 2	Add two-digit numbers by decomposing one addend to go to the next ten and adding up on a number line.
140	2	NO	Mid	Subtract Within 100 on Number Lines	Subtract two-digit numbers by decomposing one number into tens and ones and subtracting back on a number line.
141	2	NO	Mid	Practice: Subtract Within 100 on Number Lines	Subtract two-digit numbers by decomposing one number into tens and ones and subtracting back on a number line.
142	2	NO	Mid	Add to Subtract Within 100 on Number Lines, Part 1	Subtract two-digit numbers by first adding ones on a number line to go to the next ten.
143	2	NO	Mid	Practice: Add to Subtract on Number Lines, Part 1	Subtract two-digit numbers by first adding ones on a number line to go to the next ten.
144	2	NO	Mid	Add to Subtract Within 100 on Number Lines, Part 2	Subtract two-digit numbers by first adding tens on a number line to get close to the total.
145	2	NO	Mid	Practice: Add to Subtract on Number Lines, Part 2	Subtract two-digit numbers by first adding tens on a number line to get close to the total.
146	2	NO	Late	Practice: Tens and Ones	Identify decade numbers that are represented as one, two, three, four, five, six, seven, eight, or nine tens. Identify two-digit numbers that are represented as tens and ones.
147	2	NO	Late	Understand Hundreds, Tens, and Ones	Understand that one hundred is made up of 10 tens and that those 10 tens are made up of 100 ones. Understand that the digits of a three-digit number represent an amount of hundreds, tens, and ones.
148	2	NO	Late	Use Hundreds, Tens, and Ones	Understand that the digits of a three-digit number represent an amount of hundreds, tens, and ones.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.
149	2	NO	Late	Practice: Use Hundreds, Tens, and Ones	Understand that one hundred is made up of 10 tens and that those 10 tens are made up of 100 ones. Understand that the digits of a three-digit number represent an amount of hundreds, tens, and ones.
150	2	NO	Late	Practice: Add Two-Digit Numbers (Within 50)	Use models to add two-digit numbers (sums within 50), regrouping as needed.
151	2	NO	Late	Add Three-Digit and Two-Digit Numbers	Use base ten models to add a three-digit number and a two- digit number, regrouping ones and/or tens when needed.
152	2	NO	Late	Practice: Add Three-Digit and Two-Digit Numbers	Use base-ten models to add a three-digit number and a two- digit number, regrouping ones and/or tens when needed.
153	2	NO	Late	Add Three-Digit Numbers	Use base-ten models to add two three-digit numbers, regrouping ones and/or tens when needed.
154	2	NO	Late	Practice: Add Three-Digit Numbers	Use base-ten models to add two three-digit numbers, regrouping ones and/or tens when needed.
155	2	NO	Late	Practice: Subtract Multiples of Ten (Within 100	Subtract a multiple of 10 from a multiple of 10 in the range 10–90.
156	2	NO	Late	Subtract Three-Digit Numbers	Use base-ten models to subtract two three-digit numbers, regrouping tens and/or hundreds when needed.
157	2	NO	Late	Practice: Subtract Three-Digit Numbers	Use base-ten models to subtract two three-digit numbers, regrouping tens and/or hundreds when needed.
158	2	NO	Late	Practice: Add Within 100 on Number Lines	Add two-digit numbers by decomposing addends into tens and ones.
159	2	NO	Late	Add Within 1,000 on Number Lines	Add within 1,000 by decomposing one addend to add hundreds, tens, and ones on a number line. Add within 1,000 by decomposing one addend to go to the next ten and then adding up on a number line. Add within 1,000 by decomposing one addend to go to the next hundred and then adding up on a number line.
160	2	NO	Late	Practice: Add Within 1,000 on Number Lines	Add within 1,000 by decomposing one addend to add hundreds, tens, and ones on a number line.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
161	2	NO	Late	Practice: Subtract on Number Lines (Within 100)	Subtract two-digit numbers by decomposing one number into tens and ones and subtracting back on a number line.
162	2	NO	Late	Subtract Within 1,000 on Number Lines	Subtract within 1,000 by subtracting back hundreds, tens, and ones on a number line. Subtract within 1,000 by first adding up to the next hundred on a number line.
163	2	NO	Late	Practice: Subtract Within 1,000 on Number Lines	Subtract within 1,000 by subtracting back hundreds, tens, and ones on a number line.
164	2	MS	Early	Measure Lengths in Inches	Connect measurement using inch tiles to measurement with a ruler. Measure the length of an object to the nearest inch using a ruler.
165	2	MS	Early	Measure Lengths in Centimeters	Use a ruler to measure objects to the nearest centimeter.
166	2	MS	Early	Practice: Measure Lengths	Measure the length of an object to the nearest inch or to the nearest centimeter using a ruler.
167	2	MS	Early	Estimate Lengths in Inches	Use benchmarks to estimate lengths in inches. Understand when an estimate is appropriate.
168	2	MS	Early	Estimate Lengths in Centimeters	Use benchmarks to estimate lengths in centimeters. Understand when an estimate is appropriate.
169	2	MS	Early	Practice: Estimate Lengths	Use benchmarks to estimate the length of an object in inches or centimeters.
170	2	MS	Late	Understand Number Lines	Create a number line. Represent whole numbers on a number line as a distance from 0.
171	2	MS	Late	Understand Addition Using Number Lines	Represent sums within 100 on a number line.
172	2	MS	Late	Practice: Addition Using Number Lines	Represent sums within 100 on a number line.
173	2	MS	Late	Understand Subtraction Using Number Lines, Part 1	Represent differences within 100 on a number line by moving backward.
174	2	MS	Late	Practice: Subtraction Using Number Lines, Part 1	Represent differences within 100 on a number line by moving backward.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
175	2	MS	Late	Understand Subtraction Using Number Lines, Part 2	Represent differences within 100 on a number line by moving forward.
176	2	MS	Late	Practice: Subtraction Using Number Lines, Part 2	Represent differences within 100 on a number line by moving forward.
177	2	GEO	Late	Divide Shapes Into Three Equal Parts	Divide circles and rectangles into three equal parts and name the parts as thirds. Describe one whole as three thirds.
178	2	GEO	Late	Divide Shapes Into Two, Three, or Four Equal Parts	Describe an equal share using language such as one half, one third, or one fourth. Describe one whole as two halves, three thirds, or four fourths. Understand that the more equal parts a shape is divided into, the smaller each part is. Understand that equal shares of congruent wholes can have different shapes.
179	2	GEO	Late	Practice: Identify Two, Three, or Four Equal Parts	Describe an equal share using language such as one half, one third, or one fourth. Describe one whole as two halves, three thirds, or four fourths. Understand that the more equal parts a shape is divided into, the smaller each part is.
180	3	AL	Early	Understand Multiplication, Part 1	Understand that the symbol × means “groups of" and that expressions such as 5 × 7 refer to 5 groups of 7. Interpret a multiplication problem situation using pictures, objects, words, numbers, and equations. Solve multiplication problems involving equal groups with an unknown total number of objects.
181	3	AL	Early	Multiplication Word Problems, Part 1	Interpret multiplication problem situations using pictures, objects, and equations. Solve multiplication word problems involving equal groups with an unknown total number of objects.
182	3	AL	Early	Practice: Multiplication & Addition Word Problems	Interpret multiplication problem situations using pictures, objects, and equations. Solve multiplication word problems involving equal groups with an unknown total number of objects.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Solve addition word problems.
183	3	AL	Early	Understand Multiplication, Part 2	Understand that the symbol × means "groups of," and expressions such as 5 × 7 refer to 5 groups of 7. Represent a multiplication problem situation using arrays and equations. Understand that numbers can be multiplied in any order and the product will be the same (commutative property of multiplication).
184	3	AL	Early	Multiplication Word Problems, Part 2	Interpret multiplication problem situations using pictures, objects, and equations. Solve multiplication word problems involving arrays with an unknown total number of objects.
185	3	AL	Early	Practice: More Multiplication & Addition Problems	Interpret multiplication problem situations using pictures, objects, and equations. Solve multiplication word problems involving arrays with an unknown total number of objects. Solve addition word problems.
186	3	AL	Early	Practice: Multiplication Word Problems	Interpret multiplication problem situations using pictures, objects, and equations. Solve multiplication word problems involving equal groups or arrays with an unknown total number of objects.
187	3	AL	Early	Use Order and Grouping to Multiply	Understand that factors can be multiplied in any order and the product will be the same. Understand that three factors in a problem can be grouped in different ways and the product will be the same.
188	3	AL	Early	Practice: Use Order to Multiply	Understand that numbers can be multiplied in any order and the product will be the same. Apply the commutative property of multiplication as a strategy to multiply by 2, 3, and 4.
189	3	AL	Early	Practice: Use Order and Grouping to Multiply	Apply properties of operations as strategies to multiply three factors together.
190	3	AL	Early	Practice: Multiplying by 0 and 1	Multiply by a factor of 1 (Identity Property of Multiplication).

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Multiply by a factor of 0 (Zero Property of Multiplication).
191	3	AL	Early	Practice: Multiply Within 100	Fluently multiply within 100.
192	3	AL	Early	Break Apart a Number to Multiply, Part 1	Use arrays to break apart a factor as a strategy to multiply (distributive property of multiplication).
193	3	AL	Early	Break Apart a Number to Multiply, Part 2	Break apart a factor as a strategy to multiply (distributive property of multiplication).
194	3	AL	Early	Practice: Multiples of 6	Break apart a factor as a strategy to find multiples of 6.
195	3	AL	Early	Practice: Multiples of 7	Break apart a factor as a strategy to find multiples of 7.
196	3	AL	Early	Practice: Multiples of 8	Break apart a factor as a strategy to find multiples of 8.
197	3	AL	Early	Practice: Multiples of 9	Break apart a factor as a strategy to find multiples of 9.
198	3	AL	Early	Word Problems Involving Length and Money	Interpret multiplication problem situations using pictures and equations. Solve multiplication word problems involving length and money.
199	3	NO	Mid	Multiply by Multiples of 10	Use place-value understanding and properties of multiplication to multiply a one-digit whole number by a multiple of 10.
200	3	AL	Mid	Understand Division, Part 1	Understand division as sharing, knowing the number of equal shares and finding the number in each share or group. Use division expressions to represent contexts.
201	3	AL	Mid	Division Word Problems, Part 1	Interpret division problem situations using pictures, objects, and equations. Solve division word problems involving equal groups with an unknown number of objects in each group.
202	3	AL	Mid	Practice: Division & Subtraction Word Problems	Interpret division problem situations using pictures, objects, and equations. Solve division word problems involving equal groups with an unknown number of objects in each group. Solve subtraction word problems.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
203	3	AL	Mid	Understand Division, Part 2	Understand division as separating a total into equal groups, knowing the number in each group and finding the number of groups. Understand the relationship between multiplication and division.
204	3	AL	Mid	Division Word Problems, Part 2	Interpret division problem situations using pictures, objects, and equations. Solve division word problems involving equal groups or arrays with an unknown number of groups or rows.
205	3	AL	Mid	Practice: More Division & Subtraction Problems	Interpret division problem situations using pictures, objects, and equations. Solve division word problems involving equal groups or arrays with an unknown number of groups or rows. Solve subtraction word problems.
206	3	AL	Mid	Practice: Understand Division	Understand and use the relationship of multiplication and division to find quotients.
207	3	AL	Mid	Practice: Multiply and Divide Within 100	Fluently multiply and divide within 100.
208	3	AL	Mid	Practice: Multiplication & Division Word Problems	Interpret multiplication and division problem situations using pictures, objects, and equations. Solve word problems involving equal groups with an unknown total number of groups, or number in each group. Solve word problems involving arrays with an unknown total, number of rows, or number in each row.
209	3	AL	Mid	Practice: More Multiplication & Division Problems	Interpret multiplication and division problem situations using pictures, objects, and equations. Solve word problems involving equal groups with an unknown total, number of groups, or number in each group. Solve word problems involving arrays with an unknown total, number of rows, or number in each row.
210	3	AL	Mid	Practice: Divide and Multiply (Within 100)	Fluently multiply and divide within 100.
211	3	NO	Late	Understand What a Fraction Is	Understand that a fraction is a number that names equal parts of a whole. Understand that unit fractions are the building blocks of all other fractions.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Use models to represent and name fractions.
212	3	NO	Late	Model Fractions	Divide shapes into equal parts. Use models to represent and name fractions.
213	3	NO	Late	Practice: Build and Name Fractions	Use models to represent and name fractions.
214	3	NO	Late	Fractions on a Number Line, Part 1	Understand fractions as numbers on a number line. Name fractions represented by points on a number line. Represent fractions on a number line.
215	3	NO	Late	Fractions on a Number Line, Part 2	Name fractions greater than 1 represented by points on a number line. Represent fractions greater than 1 on a number line.
216	3	NO	Late	Practice: Fractions on a Number Line	Name fractions represented by points on a number line. Represent fractions on a number line.
217	3	NO	Late	Understand Equivalent Fractions	Understand that two fractions are equivalent if they are the same size, cover the same area, or are on the same point on a number line. Recognize and generate equivalent fractions using fraction models and number lines.
218	3	NO	Late	Practice: Equivalent Fractions	Recognize and generate equivalent fractions using fraction models and number lines.
219	3	NO	Late	Understand Comparing Fractions	Use models to compare two fractions. Recognize that comparisons are valid only when the two fractions refer to the same whole.
220	3	NO	Late	Compare Fractions with the Same Denominator	Compare two fractions with the same denominator by reasoning about their size. Record fraction comparison statements using the symbols >, <, and =.
221	3	NO	Late	Compare Fractions with the Same Numerator	Compare two fractions with the same numerator by reasoning about their size. Record fraction comparison statements using the symbols >, <, and =.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
222	3	NO	Late	Practice: Compare Fractions	Compare two fractions with the same denominator or numerator by reasoning about their size. Record fraction comparison statements using the symbols >, <, and =.
223	3	MS	Early	Tell and Write Time	Tell and write time to the nearest minute. Express time as the number of minutes before the hour.
224	3	MS	Early	Practice: Tell and Write Time	Tell and write time to the nearest minute. Express time as the number of minutes before the hour.
225	3	MS	Mid	Draw Scaled Picture Graphs	Recognize that data displayed in picture graphs can be represented by a scale other than 1. Draw a scaled picture graph.
226	3	MS	Mid	Draw Scaled Bar Graphs	Recognize that data displayed in bar graphs can be represented by a scale other than 1. Draw a scaled bar graph.
227	3	MS	Mid	Practice: Draw Scaled Graphs	Draw a scaled picture graph. Draw a scaled bar graph.
228	3	MS	Mid	Solve Problems Using Scaled Picture Graphs	Interpret data displayed in a scaled picture graph to solve one- step problems involving addition, subtraction, or multiplication.
229	3	MS	Mid	Solve Problems Using Scaled Bar Graphs	Interpret data displayed in a scaled bar graph to solve one- and two-step problems involving addition or subtraction.
230	3	MS	Mid	Practice: Solve Problems Using Scaled Bar Graphs	Interpret data displayed in a scaled bar graph to solve one- and two-step problems involving addition or subtraction.
231	3	GEO	Early	Understand Categories of Shapes	Identify two-dimensional shapes and their attributes. Use attributes to classify shapes into categories.
232	3	GEO	Early	Classify and Compare Quadrilaterals	Recognize rhombuses, rectangles, and squares as examples of quadrilaterals. Compare and contrast attributes of quadrilaterals.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
233	4	NO	Early	Place Value, Part 1	Use standard form, word form, and expanded form to read and write 4-digit numbers. Identify the value of a digit based on its position in a number.
234	4	NO	Early	Place Value, Part 2	Use standard form, word form, and expanded form to read and write up to 6-digit numbers. Understand that a digit in one place represents 10 times what it represents in the place to its right. Identify the value of a digit based on its position in a number.
235	4	NO	Early	Practice: Place Value	Use standard form, word form, and expanded form to read and write up to 6-digit numbers. Identify the value of a digit based on its position in a number.
236	4	NO	Early	Practice: Compare Whole Numbers	Use place-value concepts to compare multi-digit numbers. Use symbols >, =, and < to record the comparison of multi- digit whole numbers.
237	4	NO	Early	Round Whole Numbers	Use place value understanding to round multi-digit whole numbers to any place.
238	4	NO	Early	Add Whole Numbers	Use the standard algorithm to add multi-digit whole numbers.
239	4	NO	Early	Practice: Add Whole Numbers	Use the standard algorithm to add multi-digit whole numbers.
240	4	NO	Early	Subtract Whole Numbers	Use the standard algorithm to subtract multi-digit whole numbers.
241	4	NO	Early	Practice: Subtract Whole Numbers	Use the standard algorithm to subtract multi-digit whole numbers.
242	4	AL	Early	Multiplication Word Problems	Interpret multiplication problem situations using pictures and equations. Solve multiplication word problems involving equal groups, length, and money.
243	4	AL	Early	Multiplicative Comparison Word Problems, Part 1	Use drawings and equations to represent word problems involving a multiplicative comparison. Solve word problems involving a multiplicative comparison with the larger quantity unknown.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
244	4	AL	Early	Multiplicative Comparison Word Problems, Part 2	Use drawings and equations to represent word problems involving a multiplicative comparison. Solve word problems involving a multiplicative comparison with the smaller quantity unknown.
245	4	AL	Early	Practice: Multiplicative Comparison Problems	Use drawings and equations to represent word problems involving a multiplicative comparison. Solve word problems involving a multiplicative comparison with the larger quantity or smaller quantity unknown.
246	4	AL	Early	Multiplicative Comparison Word Problems, Part 3	Use drawings and equations to represent word problems involving a multiplicative comparison. Solve word problems involving a multiplicative comparison with the multiplier unknown.
247	4	AL	Early	Practice: More Multiplicative Comparison Problems	Use drawings and equations to represent word problems involving a multiplicative comparison. Solve word problems involving a multiplicative comparison with the larger quantity, smaller quantity, or multiplier unknown.
248	4	AL	Early	Practice: Understand Multiplication as Comparison	Solve word problems that indicate a multiplicative comparison. Write an equation to represent a multiplicative comparison indicated by a word problem.
249	4	AL	Early	Multiples	Given a whole number within 10, determine all its multiples up to 100. Determine whether a whole number within 100 is a multiple of a given number within 10.
250	4	AL	Early	Factors	Find all the factor pairs for a given whole number within 100. Determine whether a given whole number within 100 is prime or composite.
251	4	AL	Early	Practice: Multiples, Factors, and Prime Numbers	Determine whether a whole number within 100 is a multiple of a given number within 10. Determine whether a whole number within 10 is a factor of a given number within 100. Determine whether a given whole number within 100 is prime or composite.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
252	4	AL	Early	Division Word Problems with Remainders, Part 1	Interpret division problem situations using pictures, objects, and equations. Divide two-digit dividends by one-digit divisors, with remainders. Interpret the remainder in a division word problem.
253	4	AL	Early	Division Word Problems with Remainders, Part 2	Interpret division problem situations using pictures, objects, and equations. Divide two-digit dividends by one-digit divisors, with remainders. Interpret the remainder in a division word problem.
254	4	AL	Early	Practice: Division Word Problems with Remainders	Interpret division problem situations using pictures, objects, and equations. Divide two-digit dividends by one-digit divisors, with remainders. Interpret the remainder in a division word problem.
255	4	NO	Mid	Multiply by One-Digit Numbers, Part 1	Multiply a two-digit number by a one-digit number. Use arrays, partial products, and area models to multiply.
256	4	NO	Mid	Multiply by One-Digit Numbers, Part 2	Multiply whole numbers with three or four digits by one-digit whole numbers. Use partial products and area models to multiply.
257	4	NO	Mid	Practice: Multiply by One-Digit Numbers	Multiply whole numbers of up to four-digits by one-digit whole numbers. Use partial products and area models to multiply.
258	4	NO	Mid	Multiply Two-Digit Numbers	Multiply a two-digit number by a two-digit number. Use partial products and area models to multiply.
259	4	NO	Mid	Practice: Multiply Two-Digit Numbers	Multiply a two-digit number by a two-digit number. Use partial products and area models to multiply.
260	4	NO	Mid	Divide Whole Numbers, Part 1	Use place-value understanding, the properties of operations, and/or the relationship between multiplication and division, to divide.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Divide up to three-digit dividends by one-digit divisors, with remainders. Use place-value blocks to divide.
261	4	NO	Mid	Divide Whole Numbers, Part 2	Use place-value understanding, the properties of operations, and/or the relationship between multiplication and division, to divide. Divide up to four-digit dividends by one-digit divisors, with remainders. Use area models and partial quotients to divide.
262	4	NO	Late	Find Equivalent Fractions	Recognize and generate equivalent fractions using fraction models. Generate equivalent fractions by multiplying or dividing the numerator and denominator by the same whole number.
263	4	NO	Late	Practice: Find Equivalent Fractions	Recognize and generate equivalent fractions using fraction models. Generate equivalent fractions by multiplying or dividing the numerator and denominator by the same whole number.
264	4	NO	Late	Use Common Denominators to Compare Fractions	Use common denominators to compare two fractions with different numerators and different denominators. Record fraction comparison statements using the symbols >, <, and =.
265	4	NO	Late	Use a Benchmark to Compare Fractions	Use a benchmark to compare two fractions with different numerators and different denominators. Record fraction comparison statements using the symbols >, <, and =.
266	4	NO	Late	Practice: Use Strategies to Compare Fractions	Use common denominators or a benchmark to compare two fractions with different numerators and different denominators. Record fraction comparison statements using the symbols >, <, and =.
267	4	NO	Late	Add Fractions with Like Denominators	Extend previous understandings of addition to add fractions. Add fractions with like denominators using fraction models and equations.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
268	4	NO	Late	Subtract Fractions with Like Denominators	Extend previous understandings of subtraction to subtract fractions. Subtract fractions with like denominators using fraction models and equations.
269	4	NO	Late	Practice: Add and Subtract Fractions	Add and subtract fractions with like denominators using fraction models and equations.
270	4	NO	Late	Decompose Fractions	Decompose fractions as a sum of fractions with the same denominator in more than one way. Write a mixed number as a fraction, and write a fraction greater than 1 as a mixed number.
271	4	NO	Late	Add Mixed Numbers with Like Denominators	Add fractions with like denominators, including mixed numbers, using fraction models and equations. Decompose and compose fractions, including mixed numbers, to add.
272	4	NO	Late	Subtract Mixed Numbers with Like Denominators	Subtract fractions with like denominators, including mixed numbers, using fraction models and equations. Decompose and compose fractions, including mixed numbers, to subtract.
273	4	NO	Late	Practice: Add and Subtract Mixed Numbers	Add and subtract fractions with like denominators, including mixed numbers, using fraction models and equations. Decompose and compose fractions, including mixed numbers, to add or subtract.
274	4	NO	Late	Multiply a Unit Fraction by a Whole Number	Extend previous understandings of multiplication to multiply a unit fraction by a whole number. Multiply a unit fraction by a whole number using fraction models and equations.
275	4	NO	Late	Multiply a Fraction by a Whole Number	Multiply a fraction by a whole number using fraction models and equations.
276	4	NO	Late	Practice: Multiply a Fraction by a Whole Number	Multiply a fraction by a whole number using fraction models and equations.
277	4	NO	Late	Fractions as Tenths and Hundredths	Write a fraction that has a denominator of 10 as an equivalent fraction with a denominator of 100. Add two fractions with denominators of 10 and 100.
278	4	NO	Late	Understand and Model Decimals	Use models to represent decimals.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Write fractions with denominators of 10 or 100 as decimals. Write decimals as fractions with denominators of 10 or 100.
279	4	NO	Late	Compare Decimals	Compare two decimals up to hundredths. Record comparison statements using the symbols >, <, and =.
280	4	NO	Late	Decimals on a Number Line	Represent decimals on a number line. Name decimals represented by points on a number line.
281	4	MS	Early	Practice: Convert Metric Units of Length	Understand the relative sizes of a kilometer, meter, and centimeter. Convert meters to centimeters. Convert kilometers to meters.
282	4	MS	Early	Practice: Convert Customary Units of Length	Understand the relative sizes of a yard, foot, and inch. Convert feet to inches. Convert yards to feet.
283	4	MS	Early	Practice: Convert Metric Units of Mass	Understand the relative sizes of a kilogram and gram. Convert kilograms to grams.
284	4	MS	Early	Practice: Convert Customary Units of Weight	Understand the relative sizes of an ounce, pound, and ton. Convert pounds to ounces. Convert tons to pounds.
285	4	MS	Early	Practice: Convert Metric Units of Liquid Volume	Understand the relative sizes of a liter and milliliter. Convert liters to milliliters.
286	4	MS	Early	Practice: Convert Customary Units of Liquid Volume	Understand the relative sizes of a cup, quart, and gallon. Convert quarts to cups. Convert gallons to quarts.
287	4	MS	Early	Practice: Convert Units of Time	Understand the relative sizes of an hour, minute, and second.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Convert hours to minutes. Convert minutes to seconds.
288	4	GEO	Mid	Identify Points, Lines, and Rays	Identify and name points, lines, line segments, and rays.
289	4	GEO	Mid	Measure Angles	Use a protractor to measure an angle.
290	4	GEO	Mid	Practice: Measure Angles	Use a protractor to measure an angle. Determine whether an angle is less than or greater than 90 degrees.
291	4	GEO	Mid	Identify Angles	Identify right, acute, and obtuse angles in two-dimensional figures. Identify perpendicular and parallel lines. Identify perpendicular and parallel lines in two-dimensional figures.
292	4	GEO	Late	Classify Quadrilaterals	Classify two-dimensional figures based on parallel or perpendicular sides and on acute, obtuse, or right angles.
293	4	GEO	Late	Classify Triangles	Recognize that triangles can be classified based on the lengths of their sides (isosceles, equilateral, scalene). Name a triangle based on the kind of angles it has (acute, obtuse, right).
294	4	GEO	Late	Line Symmetry	Recognize and draw lines of symmetry in two-dimensional figures.
295	5	NO	Early	Multiply Whole Numbers	Use the standard algorithm to multiply multi-digit whole numbers.
296	5	NO	Early	Practice: Multiply Whole Numbers	Use the standard algorithm to multiply multi-digit whole numbers.
297	5	NO	Early	Divide by Two-Digit Numbers, Part 1	Use place-value understanding, the properties of operations, and/or the relationship between multiplication and division, to divide. Divide three-digit and four-digit dividends by two-digit divisors. Use area models and partial quotients to divide.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
298	5	NO	Early	Divide by Two-Digit Numbers, Part 2	Use place-value understanding, the properties of operations, and/or the relationship between multiplication and division, to divide. Divide four-digit dividends by two-digit divisors. Use partial quotients to divide.
299	5	NO	Early	Understand Powers of 10	Use exponents to denote powers of 10. Explore the relationship between the values of whole numbers when multiplying or dividing by powers of 10. Use place-value concepts to mentally multiply whole numbers by powers of 10.
300	5	NO	Early	Decimal Place Value, Part 1	Use standard form, word form, and expanded form to read and write decimals to hundredths. Understand that 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. Identify the value of a digit based on its position in a number. Represent decimals to hundredths on a number line.
301	5	NO	Early	Decimal Place Value, Part 2	Use standard form, word form, and expanded form to read and write decimals to thousandths. Understand that 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. Identify the value of a digit based on its position in a number. Represent decimals to thousandths on a number line.
302	5	NO	Early	Multiply and Divide Decimals by Powers of 10	Explore the relationship between the values of numbers when multiplying or dividing by powers of 10. Use place-value concepts to mentally multiply and divide numbers by powers of 10.
303	5	NO	Early	Practice: Decimals and Powers of 10	Use the patterns in the number of zeros of the product and the placement of the decimal point when multiplying or dividing by a power of 10. Use exponents to denote powers of 10. Use exponents to denote powers of 10.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
304	5	NO	Early	Compare Decimals up to Thousandths	Compare two decimals up to thousandths. Record comparison statements using the symbols >, <, and =.
305	5	NO	Early	Practice: Compare Decimals up to Thousandths	Compare two decimals up to thousandths. Record comparison statements using the symbols >, <, and =.
306	5	NO	Early	Round Decimals	Round decimals to the nearest hundredth, tenth, and whole number.
307	5	NO	Early	Practice: Round Decimals	Round decimals to the nearest hundredth, tenth, and whole number.
308	5	NO	Mid	Add Decimals	Use models and strategies based on place value to add decimals. Add decimals to hundredths.
309	5	NO	Mid	Subtract Decimals	Use models and strategies based on place value to subtract decimals. Subtract decimals to hundredths.
310	5	NO	Mid	Add Fractions with Unlike Denominators	Add fractions with unlike denominators using fraction models and equations. Use equivalent fractions to add fractions with unlike denominators.
311	5	NO	Mid	Subtract Fractions with Unlike Denominators	Subtract fractions with unlike denominators using fraction models and equations. Use equivalent fractions to subtract fractions with unlike denominators.
312	5	NO	Mid	Practice: Fraction Addition and Subtraction	Add and subtract fractions with unlike denominators using fraction models and equations. Use equivalent fractions to add or subtract fractions with unlike denominators.
313	5	NO	Mid	Add Mixed Numbers with Unlike Denominators	Add fractions with unlike denominators, including mixed numbers, using fraction models and equations. Use equivalent fractions to add fractions with unlike denominators, including mixed numbers.
314	5	NO	Mid	Subtract Mixed Numbers with Unlike Denominators	Subtract fractions with unlike denominators, including mixed numbers, using fraction models and equations.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Use equivalent fractions to subtract fractions with unlike denominators, including mixed numbers.
315	5	NO	Mid	Practice: Mixed Number Addition and Subtraction	Add and subtract fractions with unlike denominators, including mixed numbers, using fraction models and equations. Use equivalent fractions to add or subtract fractions with unlike denominators, including mixed numbers.
316	5	NO	Mid	Multiply a Decimal by a Whole Number	Use place-value understanding and properties of operations to multiply. Multiply a decimal less than 1 to hundredths by a whole number. Use place-value blocks to multiply.
317	5	NO	Mid	Multiply a Decimal by a Decimal	Use place-value understanding and properties of operations to multiply. Multiply decimals less than 1 to tenths with products to hundredths. Use area models to multiply.
318	5	NO	Mid	Divide a Whole Number by a Decimal	Use place value understanding and the relationship between multiplication and division to divide. Divide whole numbers by decimals to hundredths. Use decimal grids to divide.
319	5	NO	Mid	Divide a Decimal by a Decimal	Use place value understanding and the relationship between multiplication and division to divide. Divide a decimal by a decimal to hundredths. Use decimal grids and length models to divide.
320	5	NO	Mid	Divide a Decimal by a Whole Number	Use place value understanding and the relationship between multiplication and division to divide. Divide decimals by whole numbers. Use decimal grids and length models to divide.
321	5	NO	Mid	Practice: Divide Decimals	Divide a decimal by a decimal to hundredths. Divide decimals by whole numbers.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
322	5	NO	Late	Understand Fractions as Division	Solve problems involving division of whole numbers in which the quotient is a fraction or mixed number by using fraction models and equations. Understand a fraction as division of the numerator by the denominator.
323	5	NO	Late	Multiply a Whole Number by a Unit Fraction	Extend previous understandings of multiplication to multiply a whole number by a unit fraction. Multiply a whole number by a unit fraction using fraction models and equations.
324	5	NO	Late	Multiply a Whole Number by a Fraction	Extend previous understandings of multiplication to multiply a whole number by a fraction. Multiply a whole number by a fraction using fraction models and equations.
325	5	NO	Late	Divide a Whole Number by a Unit Fraction	Extend previous understandings of division to divide a whole number by a unit fraction. Divide a whole number by a unit fraction using fraction models and equations.
326	5	NO	Late	Practice: Multiply and Divide by Fractions	Multiply a whole number by a fraction using fraction models and equations. Divide a whole number by a unit fraction using fraction models and equations.
327	5	NO	Late	Multiply a Unit Fraction by a Unit Fraction	Extend previous understandings of multiplication to multiply a unit fraction by a unit fraction. Multiply a unit fraction by a unit fraction using fraction models and equations.
328	5	NO	Late	Divide a Unit Fraction by a Whole Number	Extend previous understandings of division to divide a unit fraction by a whole number. Divide a unit fraction by a whole number using fraction models and equations.
329	5	NO	Late	Practice: Multiply and Divide Unit Fractions	Multiply a unit fraction by a unit fraction using fraction models and equations. Divide a unit fraction by a whole number using fraction models and equations.
330	5	NO	Late	Multiply a Fraction by a Fraction	Multiply a fraction by a fraction using fraction models and equations.
331	5	NO	Late	Practice: Multiply a Fraction by a Fraction	Multiply a fraction by a fraction using fraction models and equations.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
332	5	AL	Late	Evaluate, Write, and Interpret Expressions	Evaluate numerical expressions containing grouping symbols. Write numerical expressions using grouping symbols. Interpret numerical expressions without evaluating them.
333	5	AL	Late	Practice: Interpret and Evaluate Expressions	Evaluate numerical expressions containing grouping symbols. Interpret numerical expressions without evaluating them.
334	5	MS	Late	Understand and Measure Volume	Understand the concept of volume as an attribute of solid figures. Find the volume of a right rectangular prism with whole- number side lengths by packing it with unit cubes. Show that the volume of a rectangular prism can be found by multiplying the edge lengths, which is equivalent to multiplying the height by the area of the base.
335	5	MS	Late	Practice: Measure Volume	Find the volume of a rectangular prism in various cubic units by filling it with unit cubes and counting them or by counting the number of unit cubes in one layer and multiplying by the number of layers.
336	5	MS	Late	Practice: Volume of Rectangular Prisms	Find the volume of a rectangular prism by multiplying its height by the area of the base. Find the volume of a rectangular prism by multiplying its edge lengths. Determine the third dimension of a rectangular prism given its volume and two dimensions.
337	5	MS	Late	Practice: Volume of Composite Figures	Use addition to find volumes of solid figures composed of two non-overlapping rectangular prisms.
338	5	GEO	Early	Identify Two-Dimensional Figures	Classify two-dimensional figures based on parallel or perpendicular sides and/or right angles.
339	5	GEO	Late	Understand the Coordinate Plane	Understand the first quadrant of the coordinate plane. Identify the x- and y-coordinates of a point in the coordinate plane. Plot a point in the coordinate plane given its x- and y-

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					coordinates.
340	5	GEO	Late	Represent Problems in the Coordinate Plane	Find the distance between two points that are on the same horizontal or vertical line in the first quadrant of the coordinate plane and use these distances to solve problems. Use and graph points in the coordinate plane to show the relationships between two real-world quantities. Interpret the coordinates of a point in the context of a real- world situation.
341	5	GEO	Late	Practice: Analyze Patterns and Relationships	Generate a numerical pattern given a rule. Identify relationships between corresponding terms of two sequences.
342	6	AL	Early	Understand Algebraic Expressions	Understand that variables represent unknown or varying quantities. Use variables to write algebraic expressions that describe mathematical situations. Identify, describe, and interpret parts of an algebraic expression.
343	6	AL	Early	Write and Evaluate Algebraic Expressions	Use variables to write algebraic expressions that describe real- world situations. Evaluate algebraic expressions at specific values of their variables, using the order of operations when appropriate.
344	6	AL	Early	Numerical Expressions with Exponents	Write numerical expressions with whole-number exponents. Evaluate numerical expressions with whole-number exponents.
345	6	AL	Early	Algebraic Expressions with Exponents	Write algebraic expressions that record operations (including exponents) with numbers and with letters standing for numbers. Evaluate algebraic expressions with exponents at specific values of their variables, using the order of operations when appropriate.
346	6	AL	Early	Practice: Numerical and Algebraic Expressions	Write expressions with and without exponents that record operations with numbers and with letters standing for numbers.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Evaluate algebraic expressions with and without exponents at specific values of their variables, using the order of operations when appropriate.
347	6	NO	Mid	Greatest Common Factor (GCF)	Find the greatest common factor (GCF) of two whole numbers less than 100. Rewrite sums using the greatest common factor of the addends and the distributive property.
348	6	NO	Mid	Least Common Multiple (LCM)	Find the least common multiple (LCM) of two whole numbers less than or equal to 12.
349	6	NO	Mid	Practice: GCF and LCM	Find the greatest common factor (GCF) of two whole numbers less than 100. Rewrite sums using the greatest common factor of the addends and the distributive property. Find the least common multiple (LCM) of two whole numbers less than or equal to 12.
350	6	NO	Mid	Understand the Standard Algorithm for Division	Make sense of the standard algorithm for division using place value models. Use the standard algorithm to divide whole numbers.
351	6	NO	Mid	Divide Whole Numbers Using the Standard Algorithm	Use the standard algorithm to divide whole numbers.
333	5	AL	Late	Practice: Interpret and Evaluate Expressions	Evaluate numerical expressions containing grouping symbols. Interpret numerical expressions without evaluating them.
334	5	MS	Late	Understand and Measure Volume	Understand the concept of volume as an attribute of solid figures. Find the volume of a right rectangular prism with whole- number side lengths by packing it with unit cubes. Show that the volume of a rectangular prism can be found by multiplying the edge lengths, which is equivalent to multiplying the height by the area of the base.
335	5	MS	Late	Practice: Measure Volume	Find the volume of a rectangular prism in various cubic units by filling it with unit cubes and counting them or by counting the number of unit cubes in one layer and multiplying by the number of layers.
336	5	MS	Late	Practice: Volume of Rectangular Prisms	Find the volume of a rectangular prism by multiplying its height by the area of the base.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Find the volume of a rectangular prism by multiplying its edge lengths. Determine the third dimension of a rectangular prism given its volume and two dimensions.
337	5	MS	Late	Practice: Volume of Composite Figures	Use addition to find volumes of solid figures composed of two non-overlapping rectangular prisms.
338	5	GEO	Early	Identify Two-Dimensional Figures	Classify two-dimensional figures based on parallel or perpendicular sides and/or right angles.
339	5	GEO	Late	Understand the Coordinate Plane	Understand the first quadrant of the coordinate plane. Identify the x- and y-coordinates of a point in the coordinate plane. Plot a point in the coordinate plane given its x- and y-coordinates.
340	5	GEO	Late	Represent Problems in the Coordinate Plane	Find the distance between two points that are on the same horizontal or vertical line in the first quadrant of the coordinate plane and use these distances to solve problems. Use and graph points in the coordinate plane to show the relationships between two real-world quantities. Interpret the coordinates of a point in the context of a real- world situation.
341	5	GEO	Late	Practice: Analyze Patterns and Relationships	Generate a numerical pattern given a rule. Identify relationships between corresponding terms of two sequences.
342	6	AL	Early	Understand Algebraic Expressions	Understand that variables represent unknown or varying quantities. Use variables to write algebraic expressions that describe mathematical situations. Identify, describe, and interpret parts of an algebraic expression.
343	6	AL	Early	Write and Evaluate Algebraic Expressions	Use variables to write algebraic expressions that describe real- world situations. Evaluate algebraic expressions at specific values of their variables, using the order of operations when appropriate.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
344	6	AL	Early	Numerical Expressions with Exponents	Write numerical expressions with whole-number exponents. Evaluate numerical expressions with whole-number exponents.
345	6	AL	Early	Algebraic Expressions with Exponents	Write algebraic expressions that record operations (including exponents) with numbers and with letters standing for numbers. Evaluate algebraic expressions with exponents at specific values of their variables, using the order of operations when appropriate.
346	6	AL	Early	Practice: Numerical and Algebraic Expressions	Write expressions with and without exponents that record operations with numbers and with letters standing for numbers. Evaluate algebraic expressions with and without exponents at specific values of their variables, using the order of operations when appropriate.
347	6	NO	Mid	Greatest Common Factor (GCF)	Find the greatest common factor (GCF) of two whole numbers less than 100. Rewrite sums using the greatest common factor of the addends and the distributive property.
348	6	NO	Mid	Least Common Multiple (LCM)	Find the least common multiple (LCM) of two whole numbers less than or equal to 12.
349	6	NO	Mid	Practice: GCF and LCM	Find the greatest common factor (GCF) of two whole numbers less than 100. Rewrite sums using the greatest common factor of the addends and the distributive property. Find the least common multiple (LCM) of two whole numbers less than or equal to 12.
350	6	NO	Mid	Understand the Standard Algorithm for Division	Make sense of the standard algorithm for division using place-value models. Use the standard algorithm to divide whole numbers.
351	6	NO	Mid	Divide Whole Numbers Using the Standard Algorithm	Use the standard algorithm to divide whole numbers.
352	6	NO	Mid	Divide Decimals Using the Standard Algorithm	Use the standard algorithm to divide multi-digit decimals.
353	6	NO	Mid	Divide Fractions: Whole-Number Quotients	Understand what it means to divide by a fraction when finding a whole number of groups.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Use visual models, multiplication equations, and division equations to represent problems involving fraction division.
354	6	NO	Mid	Divide Fractions: Fractional Quotients	Use visual models and equations to represent problems involving fraction division with fractional quotients. Divide fractions when the quotient is not a whole number.
355	6	NO	Mid	Divide Fractions: Use an Algorithm	Use visual models and equations to solve fraction division problems with fractional quotients. Divide fractions when the quotient is not a whole number.
356	6	AL	Mid	Understand Ratio Concepts	Understand the concept of a ratio. Use ratio language (e.g., "for every") and notation (e.g., "a : b").
357	6	AL	Mid	Equivalent Ratios	Recognize and create equivalent ratios. Use multiplication and division to describe equivalent ratios. Understand and reason about equivalent ratios.
358	6	AL	Mid	Practice: Equivalent Ratios	Use the concept of a ratio to explain ratio relationships. Recognize and create equivalent ratios. Describe and use equivalent ratios to solve real-world problems.
359	6	AL	Mid	Equivalent Ratio Tables	Identify and apply multiplicative relationships between the quantities in a ratio and between equivalent ratios. Make tables of equivalent ratios relating quantities with whole- number measurements and find missing values in the tables. Use reasoning and equivalent ratio tables to solve real-world problems.
360	6	AL	Mid	Graph Equivalent Ratios	Plot pairs of points in the coordinate plane that represent equivalent ratios. Use tables and points plotted in the coordinate plane to reason about equivalent ratios.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
361	6	AL	Mid	Understand Unit Rate	Understand the concept of unit rate. Find and compare unit rates.
362	6	AL	Mid	Solve Problems with Ratios and Unit Rates	Use unit rates to solve real-world problems. Solve problems by comparing unit rates.
363	6	AL	Mid	Solve Problems with Measurement Conversions	Use unit rates to solve problems involving measurement conversions.
364	6	AL	Mid	Understand Percent Concepts	Understand percent of a quantity as a rate per 100. Express fractions and decimals as percents.
365	6	AL	Mid	Find Percent of a Number	Given the whole and the part, find the percent. Given the whole and the percent, find a part. Use percents to compare ratios.
366	6	AL	Mid	Solve Problems with Percent	Solve percent problems involving finding the whole. Solve percent problems involving finding the percent of a number.
367	6	AL	Mid	Equivalent Expressions & the Distributive Property	Understand that two expressions are equivalent if they have the same value, regardless of the number that is substituted for the variable. Identify and generate equivalent expressions by applying the distributive property.
368	6	AL	Mid	Equivalent Expressions & Properties of Addition	Understand that two expressions are equivalent if they have the same value, regardless of the number that is substituted for the variable. Identify and generate equivalent expressions by applying addition properties.
369	6	AL	Mid	Practice: Equivalent Expressions	Identify and generate equivalent expressions by applying the properties of operations. Understand that two expressions are equivalent if they have the same value, regardless of the number that is substituted for the variable.
370	6	AL	Mid	Solutions of Equations	Determine whether a number in a specified set is a solution of an equation. Use models to solve equations.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
371	6	AL	Mid	Write and Solve Addition Equations	Solve equations of the form x + p = q using properties of equality. Write equations of the form x + p = q to model real-world and mathematical problems. Interpret the solution of an algebraic equation in context.
372	6	AL	Mid	Write and Solve Multiplication Equations	Solve equations of the form px = q using properties of equality. Write equations of the form px = q to model real-world and mathematical problems. Interpret the solution of an algebraic equation in context.
373	6	AL	Mid	Practice: Write and Solve Equations	Solve equations of the forms x + p = q and px = q using properties of equality. Write equations of the forms x + p = q and px = q to model real-world and mathematical problems. Interpret the solution of an algebraic equation in context.
374	6	AL	Mid	Analyze Two-Variable Relationships	Recognize that a change in the independent variable causes a change in the dependent variable. Analyze and describe the relationship between variables in tables, equations, and graphs.
375	6	AL	Mid	Practice: Analyze Two-Variable Relationships	Recognize that a change in the independent variable causes a change in the dependent variable. Analyze and describe the relationship between variables in tables, equations, and graphs.
376	6	NO	Late	Understand Integers	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values. Understand an integer as a point on the number line. Use a number line to order and compare integers.
377	6	NO	Late	Order Positive and Negative Numbers	Compare and order rational numbers using their relative position on a number line.
378	6	NO	Late	Understand Absolute Value	Understand the meaning of absolute value on a number line and in context.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Find absolute values. Distinguish comparisons of absolute value from statements about order.
379	6	NO	Late	Practice: Positive and Negative Numbers	Use positive and negative numbers to represent quantities in real-world contexts. Solve problems using rational numbers and absolute value. Compare and order rational numbers, including absolute values of rational numbers.
380	6	NO	Late	Understand the Four-Quadrant Coordinate Plane	Understand that the axes of the coordinate plane can be extended in the negative direction to represent negative numbers. Plot ordered pairs and identify the coordinates in all four quadrants in the coordinate plane. Identify the quadrant a point is located in based on its coordinates.
381	6	NO	Late	Distance in the Coordinate Plane	Understand that when two ordered pairs differ only in the signs of their coordinates, the points are reflections of each other across one or both axes. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Find distances between points in the coordinate plane with the same first coordinate or the same second coordinate by graphing the points and by using absolute value.
382	6	AL	Late	Understand Inequalities	Write, graph, and interpret solutions of inequalities of the form $x > c$ or $x < c$. Understand that inequalities have infinitely many solutions. Determine whether a number in a specified set is a solution of an inequality.
383	6	AL	Late	Write and Solve Inequalities	Write, graph, and interpret solutions of inequalities of the form $x > c$ or $x < c$, and inequalities of the form $x \geq c$ and $x \leq c$. Determine whether a number in a specified set is a solution of an inequality.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Understand that some real-world situations are represented by inequalities whose graphs consist of a discrete set of points.
384	6	MS	Early	Understand Statistical Questions	Understand how a statistical question differs from other types of questions. Interpret data in a frequency table collected from a statistical question.
385	6	MS	Early	Dot Plots	Understand how to represent data in a dot plot. Describe a set of data by its center, spread, and overall shape when given a dot plot.
386	6	MS	Mid	Box Plots	Understand how to represent data in a box plot. Describe a set of data by its center, spread, and overall shape when given a box plot.
387	6	MS	Mid	Medians and Quartiles	Understand median as a measure of center. Calculate the median and quartiles of a data set. Construct box plots and use the IQR to measure variability of a data set. Interpret the median and IQR in a given context.
388	6	MS	Mid	Mean and Mean Absolute Deviation	Calculate the mean of a data set. Calculate the MAD of a data set. Interpret the mean and MAD of data sets in different contexts. Determine the effect of outliers on the mean and MAD of data sets.
389	6	GEO	Mid	Find the Area of Parallelograms	Find the area of a parallelogram by composing or decomposing into rectangles. Develop formula A = bh for the area of a parallelogram. Identify base/height pairs for a parallelogram. Use formula A = bh to find the area of a parallelogram.
390	6	GEO	Mid	Find the Area of Triangles	Find the area of a triangle by composing or decomposing into rectangles and parallelograms. Identify base/height pairs for a triangle.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Develop formula A = 1/2bh for the area of a triangle. Use formula A = 1/2bh to find the area of a triangle.
391	6	GEO	Mid	Find the Area of Polygons	Find the area of a polygon by composing or decomposing into triangles, parallelograms, or rectangles.
392	6	GEO	Late	Use Nets to Find Surface Area	Identify and draw nets for three-dimensional figures. Use a net to find the surface area of a three-dimensional figure. Recognize rectangular and triangular prisms and pyramids. Identify the number of faces, edges, and vertices of a three- dimensional figure. Understand surface area of a prism or pyramid as the sum of the areas of its faces.
393	7	NO	Mid	Understand Addition with Integers	Understand adding positive and negative numbers using a number line. Understand that a number and its opposite have a sum of 0.
394	7	NO	Mid	Understand Subtraction with Integers	Understand that subtracting a number is equivalent to adding the inverse of the number. Use that understanding to subtract integers.
395	7	NO	Mid	Practice: Add and Subtract Integers	Understand that subtracting a number is equivalent to adding the inverse of the number. Use that understanding to subtract integers. Understand adding positive and negative numbers using a number line. Understand that a number and its opposite have a sum of 0.
396	7	NO	Mid	Strategies to Add and Subtract Integers	Develop methods for adding and subtracting integers by reasoning about their absolute value. Add and subtract integers without a number line.
397	7	NO	Mid	Practice: Strategies to Add and Subtract Integers	Develop methods for adding and subtracting integers by reasoning about their absolute value. Add and subtract integers without a number line.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
398	7	NO	Mid	Understand Distance on the Number Line	Use subtraction and absolute value to find the distance between two numbers on a number line.
399	7	NO	Mid	Add and Subtract Rationals	Add and subtract with negative fractions and decimals.
400	7	NO	Mid	Practice: Add and Subtract Rationals	Add and subtract with negative fractions and decimals.
401	7	NO	Mid	Strategies to Add and Subtract Rationals	Use properties of operations to add and subtract rational numbers.
402	7	NO	Mid	Practice: Strategies to Add and Subtract Rationals	Use properties of operations to add and subtract with negative fractions. Estimate sums and differences involving negative fractions or decimals.
403	7	NO	Mid	Multiply Integers	Apply and extend previous understandings of multiplication to multiply integers. Establish and recognize rules for multiplying signed numbers.
404	7	NO	Mid	Divide Integers	Apply and extend previous understandings of multiplication and division to divide integers. Establish and recognize rules for dividing signed numbers.
405	7	NO	Mid	Practice: Multiply and Divide Integers	Apply and extend previous understandings of multiplication and division to multiply and divide integers. Solve real-world problems involving products and quotients of integers.
406	7	NO	Mid	Multiply and Divide Rationals	Understand that all quotients of integers (with non-zero divisors) are rational numbers. Find products and quotients of rational numbers using properties of operations and rules for multiplying signed numbers. Interpret products and quotients of rational numbers by describing real-world contexts.
407	7	NO	Mid	Practice: Multiply and Divide Rationals	Understand that all quotients of integers (with non-zero divisors) are rational numbers. Find products and quotients of rational numbers using properties of operations and rules for multiplying signed numbers.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Interpret products and quotients of rational numbers by describing real-world contexts.
408	7	NO	Mid	Express Rational Numbers as Decimals	Use the standard algorithm for division to express a rational number as a terminating or repeating decimal. Use repeating bar notation to represent a repeating decimal. Understand that all rational numbers have a terminating or repeating decimal expansion.
409	7	NO	Mid	Solve Problems with Rational Numbers	Solve real-world problems involving the four operations with rational numbers. Use estimation to assess the reasonableness of answers.
410	7	AL	Early	Unit Rates for Ratios with Fractions, Part 1	Find unit rates for ratios with one fraction.
411	7	AL	Early	Unit Rates for Ratios with Fractions, Part 2	Find unit rates for ratios with two fractions.
412	7	AL	Early	Practice: Unit Rates for Ratios with Fractions	Find unit rates for ratios with fractions.
413	7	AL	Early	Understand Proportional Relationships	Identify a proportional relationship by testing for equivalent ratios in a table and/or observing whether the graph is a straight line through the origin. Using a table and graph, identify the rate as the constant of proportionality.
414	7	AL	Early	Write Equations for Proportional Relationships	Given a table of equivalent ratios or a graph, write the corresponding equation (y = kx) and identify the unit rate. Describe the meaning of points on the graph of a proportional relationship.
415	7	AL	Early	Practice: Proportional Relationships	Write an equation for a proportional relationship that is represented by a table, graph, or verbal description. Analyze and solve problems about proportional relationships that are represented in different ways.
416	7	AL	Mid	Equivalent Linear Expressions	Apply the distributive property to expand and factor linear expressions with rational coefficients. Apply addition properties to generate equivalent expressions.
417	7	AL	Mid	Practice: Equivalent Linear Expressions	Apply the distributive property to expand and factor linear expressions with rational coefficients.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Apply addition properties to generate equivalent expressions.
418	7	AL	Mid	Reasons for Equivalent Linear Expressions	Use algebraic expressions to represent quantities in a problem. Understand how changing the way an expression is written can illustrate different aspects of the problem.
419	7	AL	Mid	Understand Multi-Step Equations	Use linear equations to represent multi-step problems. Use number sense to solve linear equations with integer coefficients.
420	7	AL	Mid	Solve Multi-Step Equations, Part 1	Solve one-variable equations of the form px + q = r, in which p, q, and r are non-zero rational numbers.
421	7	AL	Mid	Solve Multi-Step Equations, Part 2	Solve one-variable equations of the form p(x + q) = r, in which p, q, and r are non-zero rational numbers.
422	7	AL	Mid	Write and Solve Multi-Step Equations	Understand the difference between an arithmetic solution and an algebraic solution. Write and solve one-variable equations of the form px + q = r to model real-world problems. Write and solve one-variable equations of the form p(x + q) = r to model real-world problems.
423	7	AL	Mid	Practice: Write and Solve Multi-Step Equations	Solve equations of the forms px + q = r and p(x + q) = r. Model and solve word problems leading to equations of the forms px + q = r and p(x + q) = r.
424	7	AL	Mid	Understand Solutions of Inequalities	Solve an inequality using substitution and a table. Reason about an inequality that describes a real-world situation. Understand the connection between solving an inequality and solving its related equation.
425	7	AL	Mid	Solve Inequalities	Understand properties of inequalities. Solve a one-step or two-step inequality algebraically.
426	7	AL	Mid	Solve Problems with Inequalities	Solve word problems that can be modeled with inequalities.
427	7	AL	Mid	Solve Percent Problems, Part 1	Solve percent problems involving adding to an original amount.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Solve percent problems involving subtracting from an original amount.
428	7	AL	Mid	Practice: Solve Percent Problems	Solve percent problems involving adding to an original amount. Solve percent problems involving subtracting from an original amount.
429	7	AL	Mid	Solve Percent Problems, Part 2	Solve percent problems involving discounts, using proportional relationships. Solve percent problems using diagrams and equations.
430	7	AL	Mid	Solve Percent Problems, Part 3	Solve percent problems involving tax and tips, using proportional relationships. Solve percent problems using diagrams and equations.
431	7	AL	Mid	Percent Change	Solve percent problems involving percent increase and decrease. Solve percent problems involving percent error.
432	7	MS	Early	Understand Random Sampling	Understand that a representative sample can be used to gain information about a population. Understand that a random sample of a population is likely to be representative of the population and can be used to support valid inferences about the population. Identify or describe methods that will result in a representative and/or random sample of a population.
433	7	MS	Early	Make Inferences About Populations Using Samples	Use proportional reasoning to make inferences about a population from a single sample.
434	7	MS	Mid	Compare Populations	Compare two populations using measures of center and measures of variability for their random samples. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities. Calculate and use a multiple of a measure of variability to describe the difference between two populations.
435	7	MS	Late	Understand Probability	Understand that the probability of a chance event can be represented with a number between 0 and 1. Represent the likelihood of an event on a number line. For a given situation, determine if the probability of an event is closer to 0 or 1.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Describe an event as impossible, unlikely, equally likely, very likely, or certain.
436	7	MS	Late	Use Experimental Probability to Make Predictions	Use the results of an experiment to calculate the experimental probability of an event. Use the experimental probability of an outcome in an experiment to predict the outcome of a similar experiment.
437	7	MS	Late	Understand and Use Probability Models	Develop a uniform probability model by assigning equal probability to all outcomes and use the model to determine probabilities of events. Compare theoretical probabilities to experimental probabilities. Explain possible discrepancies. Develop a non-uniform probability model and use the model to determine the probabilities of events.
438	7	GEO	Early	Understand Scale Drawings	Understand that scale drawings are figures with the same angles and with side lengths in equivalent ratios. Calculate and use a scale factor to find an unknown length.
439	7	GEO	Early	Use Scale Factors	Use a scale factor to find an unknown length either in a scale drawing or in the object it represents. Use a scale factor to find area.
440	7	GEO	Mid	Understand Area and Circumference of a Circle	Understand that a circle's diameter and its circumference have a proportional relationship; the constant of proportionality is called pi (π). Use proportional reasoning and the formula for circumference of a circle to solve problems involving radius, circumference, and diameter. Use the formula for area of a circle to solve area problems.
441	7	GEO	Late	Area and Surface Area	Use given areas and given lengths to solve problems involving unknown lengths of two-dimensional composite figures. Use given surface areas and given lengths to solve problems involving unknown lengths of right prisms. Apply knowledge of surface area of right prisms to solve real- world and mathematical problems involving surface areas of composite figures.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
442	7	GEO	Late	Understand Angle Relationships	Understand the relationships between special angles formed by intersecting lines. Use properties of complementary, supplementary, vertical, and adjacent angles to find unknown angle measures.
443	8	NO	Mid	Properties of Positive Integer Exponents, Part 1	Understand these properties of positive integer exponents: power of a power: (a^m)^n = a^mn product of powers: a^m × a^n = a^(m + n) quotient of powers: a^m / a^n = a^(m – n) Apply the properties of positive integer exponents to simplify expressions and to generate equivalent expressions.
444	8	NO	Mid	Properties of Positive Integer Exponents, Part 2	Understand these properties of positive integer exponents: power of a product: (ab)^m = (a^m)(b^m) power of a quotient: (a/b)^m = (a^m)/(b^m) Apply the properties of positive integer exponents to simplify expressions and to generate equivalent expressions.
445	8	NO	Mid	Properties of Zero and Negative Exponents	Understand that a^0 = 1 and be able to explain why this is true. Understand that a^–n= 1/a^n for integer values of n and be able to explain why this is true. Apply the properties of exponents to simplify and rewrite numerical expressions with zero and negative integer exponents.
446	8	NO	Late	Find Square Roots and Cube Roots to Solve Problems	Find square roots of perfect squares. Find cube roots of perfect cubes. Recognize that squaring a number and taking the square root of a number are inverse operations. Recognize that cubing a number and taking the cube root of a number are inverse operations. Solve problems that involve finding the square root or cube root of a number.
447	8	AL	Early	Proportional Relationships and Slope	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Find the slope of a line from two points. Understand that the slope is the same between any two distinct points on a line.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
448	8	AL	Early	Derive Linear Equations	Derive the equation y = mx for a line through the origin. Derive the equation y = mx + b for a line that intercepts the y- axis at b. Write the equation of a line given its graph.
449	8	AL	Early	Graph Linear Equations	Graph a linear equation given in slope-intercept form. Understand that slope can be positive, negative, 0, or undefined.
450	8	AL	Early	Solve Linear Equations	Solve linear equations with the variable on both sides, including equations that require applying the distributive property and collecting like terms.
451	8	AL	Early	Number of Solutions for Linear Equations	Determine whether a linear equation in one variable has one solution, infinitely many solutions, or no solution. Write a linear equation in one variable that has one solution, infinitely many solutions, or no solution.
452	8	AL	Early	Understand Systems of Linear Equations	Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. Use graphs and tables to identify the solutions to systems of two linear equations in two variables. Determine whether a system of two linear equations has one solution, infinitely many solutions, or no solution by analyzing graphs.
453	8	AL	Early	Graph Systems of Linear Equations	Solve systems of equations by graphing.
454	8	AL	Early	Solve Systems of Linear Equations: Substitution	Estimate the solution of a system of linear equations by graphing. Use substitution to solve systems of linear equations with one solution, no solution, or infinitely many solutions.
455	8	AL	Early	Solve Systems of Linear Equations: Elimination	Use elimination to solve systems of linear equations. Identify efficient ways to solve a system of linear equations.
456	8	AL	Mid	Understand Functions	Understand that a function is a rule that assigns to each input exactly one output.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Identify whether a relationship is a function from a verbal description, table of values, graph, or equation. Classify a function as linear or nonlinear. Interpret the equation y = mx + b as defining a linear function whose graph is a non-vertical straight line.
457	8	AL	Mid	Linear Functions: Rate of Change and Initial Value	Use linear functions to describe linear relationships. Identify and interpret the rate of change and initial value of a linear function from a graph or table.
458	8	AL	Mid	Linear Functions: Model from Two Points	Identify and interpret the rate of change and initial value of a linear function from two points on a graph or in a table. Write an equation for a linear function from two points.
459	8	AL	Mid	Linear Functions: Model from a Verbal Description	Identify and interpret the rate of change and initial value of a linear function from a verbal description. Write an equation for a linear function to model a relationship between two quantities described verbally.
460	8	AL	Mid	Compare Functions	Compare rates of change in proportional relationships. Solve problems that require comparing linear functions represented in different ways.
461	8	MS	Mid	Analyze Scatter Plots and Fit a Linear Model	Construct scatter plots for sets of bivariate data. Interpret scatter plots to determine the association between two quantities. Interpret the meaning of an association between two quantities, in context. Determine, informally by visual inspection, whether a line is a good fit for data that show a linear association. Informally determine a line of fit for data that show a linear association.
462	8	MS	Mid	Equations for Linear Models	Write an equation of a linear model for data with a linear association. Interpret the slope and y-intercept of a linear model in the context of the data. Use a linear model to solve problems in the context of the data.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
463	8	GEO	Early	Understand Rigid Transformations	Identify rigid transformations. Understand that rigid transformations may change the position, location, and orientation of a figure, but not side lengths, angle measurements, or parallel sides. Identify the corresponding sides and angles of a figure and its image.
464	8	GEO	Early	Translations	Understand and perform translations. Perform a translation on a figure and identify the coordinates of the vertices of its image.
465	8	GEO	Early	Reflections	Understand and perform reflections. Perform a reflection on a figure and identify the coordinates of the vertices of its image.
466	8	GEO	Early	Rotations	Understand and perform rotations. Perform a rotation on a figure and identify the coordinates of the vertices of its image.
467	8	GEO	Early	Dilations and Similarity	Understand that a dilation is a transformation that makes a scale copy of a figure and that a dilation image is similar to the original figure. Understand that similar figures have congruent corresponding angles and proportional corresponding side lengths. Understand that the corresponding vertices of a dilated image and its original figure lie on the same ray through the center of dilation.
468	8	GEO	Early	Dilations in the Coordinate Plane	Perform dilations in the coordinate plane with the center of dilation at the origin. Understand that when the center of dilation is the origin, the coordinates of corresponding vertices are proportional.
469	8	GEO	Early	Describe Angle Relationships	Identify corresponding angles, alternate exterior angles, and alternate interior angles when given a pair of lines cut by a transversal. Find unknown angle measures when given a pair of parallel lines cut by a transversal.
470	8	GEO	Early	Describe Angle Relationships in Triangles	Understand that the interior angle measures of a triangle have a sum of 180º.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Understand that the measure of an exterior angle of a triangle is equal to the sum of the measures of the two nonadjacent interior angles.

i-Ready Personalized Instruction: Extra Teacher-Assigned Lessons (TAL) for Grades K–8

Table 2. *i-Ready Personalized Instruction:* : Extra Teacher-Assigned Lessons for Grades K–8					
Seq.	**Grade**	**Domain**	**Level**	**Lesson Title (English)**	**Lesson Objective (English)**
1	2	NO	TAL Only	Add up to Four Two-Digit Numbers	Apply strategies based on place value and properties of operations to add up to four two-digit numbers.
2	2	NO	TAL Only	Add or Subtract 10 or 100	Mentally add 10 or 100 to a given number 100–900. Mentally subtract 10 or 100 from a given number 100–900.
3	2	AL	TAL Only	Solve Two-Step Problems	Use addition and subtraction to solve two-step problems. Use drawings and/or equations with a symbol for the unknown number to represent two-step problems.
4	2	AL	TAL Only	Add Using Arrays	Arrange objects in an array of up to 5 rows with 5 items in each row. Calculate the number of items in an array using repeated addition and skip-counting. Write an equation to express the total number of items in an array.
5	2	MS	TAL Only	Understand Measurement with Different Units	Understand how the number of units used to measure is related to the size of the units used.
6	2	MS	TAL Only	Compare Lengths	Measure to determine how much longer or shorter one object is than another.
7	2	MS	TAL Only	Solve Problems Involving Length	Use addition and subtraction to solve word problems involving lengths. Use models, including a number line, to solve word problems involving lengths.
8	2	MS	TAL Only	Make Line Plots	Measure lengths and make a line plot to show the measurements.
9	2	GEO	TAL Only	Recognize and Draw Shapes	Identify triangles, quadrilaterals, pentagons, and hexagons based on the number of sides and angles they have. Draw a shape based on specific attributes.
10	2	GEO	TAL Only	Practice: Recognize Shapes	Identify triangles, quadrilaterals, pentagons, and hexagons based on the number of sides and angles they have.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
11	3	NO	TAL Only	Use Place Value to Round Numbers	Round two- and three-digit numbers to the nearest 10. Round three-digit numbers to the nearest 100.
12	3	NO	TAL Only	Add and Subtract Within 1,000	Use a variety of strategies to fluently add within 1,000. Use a variety of strategies to fluently subtract within 1,000. Estimate to determine if an answer is reasonable.
13	3	NO	TAL Only	Practice: Use Place Value to Add Within 1,000	Use base-ten models and place value concepts to add two three-digit numbers, regrouping ones and/or tens when needed.
14	3	NO	TAL Only	Practice: Use Place Value to Subtract Within 1,000	Use base-ten models and place value concepts to subtract two three-digit numbers, regrouping ones and/or tens when needed.
15	3	NO	TAL Only	Practice: Add and Subtract Within 1,000, Part 1	Use a variety of strategies to fluently add and subtract within 1,000.
16	3	NO	TAL Only	Practice: Add and Subtract Within 1,000, Part 2	Use a variety of strategies to fluently add and subtract within 1,000.
17	3	AL	TAL Only	Practice: Multiples of 2	Develop strategies for finding multiples of 2.
18	3	AL	TAL Only	Practice: Multiplying by 10	Develop strategies for multiplying by a factor of 10.
19	3	AL	TAL Only	Practice: Multiplying by 5	Develop strategies for multiplying by a factor of 5.
20	3	AL	TAL Only	Practice: Multiples of 3	Develop strategies for finding multiples of 3.
21	3	AL	TAL Only	Practice: Multiples of 4	Develop strategies for finding multiples of 4.
22	3	AL	TAL Only	Solve Two-Step Word Problems Using the Four Operations	Determine operations needed to solve two-step word problems. Model two-step problems with four operations using a variety of representations, including equations with a variable. Solve two-step problems with four operations. Assess the reasonableness of answers.
23	3	AL	TAL Only	Practice: Multiples of 5 and 10	Understand that numbers can be multiplied in any order and the product will be the same.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Apply the commutative property of multiplication as a strategy to find multiples of 5 and 10.
24	3	AL	TAL Only	Understand Patterns	Use number properties to find and explain patterns. Use knowledge of even and odd numbers to find and explain patterns.
25	3	MS	TAL Only	Solve Problems About Time	Measure time intervals in minutes using clock models and number lines. Solve word problems involving addition of time intervals in minutes. Solve word problems involving subtraction of time intervals in minutes.
26	3	MS	TAL Only	Solve Problems About Liquid Volume	Understand the relative sizes of a liter and a milliliter. Use unit size to measure and estimate liquid volume. Solve one-step word problems involving liquid volume.
27	3	MS	TAL Only	Understand Area	Recognize area as an attribute of plane figures. Understand how to measure area by covering a shape with unit squares and counting the squares. Find the area of shapes using unit squares (non-standard units, square inch, square foot).
28	3	3.MS	TAL Only	Add and Multiply to Find Area	Understand that multiplying side lengths of a rectangle provides the same results as tiling it and counting the units. Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real world and mathematical problems. Decompose rectilinear shapes formed by rectangles to find the area. Use the distributive property to find the area of combined rectangles.
29	3	MS	TAL Only	Connect Area and Perimeter	Understand the difference between perimeter and area. Use side lengths to find the perimeter of a shape. Find an unknown side length given the perimeter of a shape.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
30	3	MS	TAL Only	Measure Length and Plot Data on Line Plots	Use a ruler to measure objects to the nearest 1/2 inch. Use a ruler to measure objects to the nearest 1/4 inch. Display measurement data in a line plot.
31	3	GEO	TAL Only	Divide Shapes Into Parts with Equal Areas	Partition a shape into equal areas. Express the area of an equal part as a unit fraction of the area of the whole shape. Partition the same shape in different ways.
32	4	NO	TAL Only	Practice: Place Value to Thousands	Represent a four-digit number in multiple ways.
33	4	NO	TAL Only	Add and Subtract Fractions	Solve word problems involving addition and subtraction of fractions and mixed numbers referring to the same whole and having like denominators. Use fraction models, number lines, and equations to represent the word problems.
34	4	AL	TAL Only	Solve Multi-Step Problems	Solve multi-step word problems. Use estimation strategies to make sure the answer makes sense.
35	4	AL	TAL Only	Number and Shape Patterns	Use rules to generate or extend a number or shape pattern. Analyze and describe features in number and shape patterns.
36	4	MS	TAL Only	Solve Word Problems Involving Measurement	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Use the four operations to solve word problems involving distances, liquid volumes, and weights and masses of objects, including problems involving simple fractions or decimals. Represent measurement quantities using diagrams.
37	4	MS	TAL Only	Add and Subtract Angle Measures	Recognize that an angle is a geometric shape measured in degrees. Identify angle measures and show that angles can be put together to form larger angles and broken up into two or more smaller angles. Use addition and subtraction to find unknown angle measures.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
38	4	MS	TAL Only	Express Measurements in Larger Units	Convert measurements from a larger unit to a smaller unit within the same system. Create a conversion table showing equivalent measurements within the same system.
39	5	NO	TAL Only	Add and Subtract Fractions in Word Problems	Solve word problems involving addition and subtraction of fractions referring to the same whole and having unlike denominators. Estimate the reasonableness of solutions to word problems involving addition and subtraction of fractions referring to the same whole.
40	5	NO	TAL Only	Multiply Fractions to Find Area	Find the area of rectangles with fractional side lengths using tiles. Find the area of rectangles with fractional side lengths by multiplying side lengths.
41	5	NO	TAL Only	Divide Unit Fractions in Word Problems	Represent and solve real-world problems involving division of unit fractions by whole numbers using visual fraction models and equations. Represent and solve real-world problems involving division of a whole number by unit fractions using visual fraction models and equations.
42	5	NO	TAL Only	Practice: Add Decimals	Add decimals to hundredths.
43	5	NO	TAL Only	Practice: Subtract Decimals	Subtract decimals to hundredths.
44	5	NO	TAL Only	Practice: Whole Numbers and Powers of Ten	Use the patterns in the number of zeros of the product and the placement of the decimal point when multiplying or dividing by a power of ten. Use exponents to denote powers of ten.
45	5	MS	TAL Only	Solve Word Problems Involving Conversions	Solve multi-step real world problems that require expressing measurements in larger or smaller units within a measurement system.
46	5	MS	TAL Only	Measure Volume Using Formulas	Solve real world problems involving volumes of right rectangular prisms by multiplying the height by the area of the base or using the formula V = l x w x h. Use addition to find volumes of solid figures composed of two non-overlapping right rectangular prisms.
47	5	GEO	TAL Only	Classify Two-Dimensional Figures	Understand that attributes belonging to a category of two- dimensional figures also belong to all subcategories of that category. Classify two-dimensional figures in a hierarchy based on

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					properties.
48	5	GEO	TAL Only	Analyze Patterns and Relationships	Generate a numeric sequence given a rule. Identify apparent relationships between corresponding terms of two sequences. Graph ordered pairs on a coordinate plane.
49	6	NO	TAL Only	Multiplication of Decimals	Estimate products of decimal numbers. Multiply multi-digit decimal numbers up to the thousandths.
50	6	MS	TAL Only	Histograms	Display numerical data on a histogram. Describe what kinds of inferences can be drawn from a histogram. Describe the overall pattern of data in a histogram.
51	6	MS	TAL Only	Understand Mean and MAD	Understand that data distribution can be described by its center, spread, and overall shape. Recognize that the mean for a numerical data set summarizes all of its values with a single number. Recognize that the MAD for a numerical data set describes how its values vary with a single number.
52	6	MS	TAL Only	Choice of Measures of Center and Variability	Use the shape of a data distribution to determine which measure of center and variability to use. Use the context in which data was collected to determine which measure of center and variability to use. Describe the effects of an outlier on the mean value of a data set.
53	6	MS	TAL Only	Understand Statistical Questions	Understand how a statistical question differs from other types of questions. Understand that a data set collected to answer a statistical question has a distribution that can be described by its center, spread, and overall shape. Summarize a data set by reporting the number of observations. Understand how to represent data in a frequency table and dot plot.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
54	6	MS	TAL Only	Dot Plots and Histograms	Display data in a dot plot and histogram. Summarize a data set by describing the nature of the attribute under investigation, including how it was measured and its units of measurement. Describe a set of data by its center, range, and overall shape when given a dot plot or histogram.
55	6	GEO	TAL Only	Concepts of Area and Perimeter	Find the area of rectangles, squares, and right triangles. Analyze the differences between perimeter and area.
56	7	GEO	TAL Only	Nets and Surface Area	Identify or draw 2D nets made up of rectangles and triangles that represent 3D objects. Use nets of three-dimensional figures to find the surface area of rectangular and triangular prisms and pyramids. Apply knowledge of nets of three-dimensional figures to solve real-world and mathematical problems involving spatial representation and surface area.
57	6	GEO	TAL Only	Volume with Fractional Length	Find the volume of a right rectangular prism with fractional edge lengths by filling the prism with unit cubes of the appropriate unit fraction edge lengths. Apply the formulas V = lwh or V = Bh to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
58	6	GEO	TAL Only	Area of Parallelograms	Find the area of a parallelogram with whole number side lengths by composing/decomposing. Develop the formula A = b x h for the area of a parallelogram. Identify base/height pairs for a parallelogram. Use the formula A = b x h to find the area of a parallelogram with fractional or decimal side lengths.
59	6	GEO	TAL Only	Area of Triangles and Other Polygons	Find the area of triangles by composing or decomposing into rectangles and parallelograms. Identify base/height pairs for a triangle. Develop the formula A = 1/2 bh for the area of a triangle. Find the area of polygons by composing or decomposing into triangles, parallelograms, or rectangles.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
60	7	MS	TAL Only	Using Mean and Mean Absolute Deviation to Compare Data	Calculate the mean absolute deviation of a set of data. Compare the variability of two populations with similar means and ranges using their mean absolute deviation. Visually compare the means of two populations with similar variability by using their dot plots. Calculate the difference in means of two populations and determine if it is likely that the difference is the result of chance.
61	7	MS	TAL Only	Using Measures of Center and Variability to Compare Data	Compare the medians of two populations with similar variability using the interquartile range (IQR). Visually compare the medians of two populations with similar variability by using their box plots. Calculate the difference in medians of two populations and determine if it is likely that the difference is the result of chance.
62	7	MS	TAL Only	Probability Concepts	Explain why the probability of an event cannot be greater than 1. Explain why events that are likely to occur have probabilities close to 1, unlikely to occur have probabilities near 0, etc. Evaluate probabilities to determine how likely an event is to occur.
63	7	MS	TAL Only	Experimental Probability	Approximate the probability of a chance event occurring by observing its behavior in the long run. Predict the approximate relative frequency of a chance event, given the probability of the event occurring.
64	7	MS	TAL Only	Probability Models	Create a probability model, given a table of data, a description of an event, or a diagram. Compare probability models to data collected through observation.
65	7	MS	TAL Only	Probability of Compound Events	Find probabilities of compound events using organized lists, tables, and tree diagrams.
66	7	MS	TAL Only	Simulations of Compound Events	Design and use a simulation to observe frequencies of compound events.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
67	7	MS	TAL Only	Understand Random Sampling	Understand that a representative sample can be used to gain information about a population. Understand that a random sample of a population is likely to be representative of the population and can be used to support valid inferences about the population. Identify or describe methods that will result in a representative and/or random sample of a population.
68	7	MS	TAL Only	Reason about Random Samples	Use proportional reasoning to make inferences about a population from a single sample. Understand that it is possible to draw inferences about a population from one random sample or from many random samples. Make and compare inferences from different random samples of the same population.
69	7	GEO	TAL Only	Area and Circumference of a Circle	Understand the relationship between circumference and area of a circle. Use the formulas for area and circumference of a circle to solve problems.
70	7	GEO	TAL Only	Area of Composed Figures	Find the area of two-dimensional objects composed of triangles and quadrilaterals. Apply formulas to solve real-world mathematical problems.
71	7	GEO	TAL Only	Surface Area of Composed Figures	Find the surface area of three-dimensional objects composed of cubes and right prisms. Apply formulas to solve real-world mathematical problems.
72	8	NO	TAL Only	Scientific Notation	Write numbers as the product of a single digit and an integer power of ten. Write numbers expressed with scientific notation in standard notation. Compare the size of quantities written in scientific notation.
73	8	NO	TAL Only	Approximating Irrational Numbers	Estimate square roots to the nearest hundredth. Compare and order rational and irrational numbers using a number line.
74	8	MS	TAL Only	Scatter Plots	Construct a scatterplot with quantitative data from two variables.

Seq.	Grade	Domain	Level	Lesson Title (English)	Lesson Objective (English)
					Identify clusters and outliers in a scatterplot. Determine if there is a linear or non-linear association in a scatterplot. Determine if a linear association is positive or negative in a scatterplot.
75	8	MS	TAL Only	Linear Models	Use a straight line to model a relationship between two quantitative variables. Informally evaluate the fit of the line by judging the closeness of data points to the line.
76	8	MS	TAL Only	Problem Solving with Linear Models	Interpret the slope and intercepts of a given equation of a linear model to solve problems.
77	8	GEO	TAL Only	The Pythagorean Theorem	Show and explain an informal proof of the Pythagorean Theorem. Understand the converse of the Pythagorean Theorem. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in two and three dimensions.
78	8	GEO	TAL Only	Applications of the Pythagorean Theorem	Use absolute value to find the distance between two points in the coordinate plane with the same x-coordinates or the same y-coordinates. Use the Pythagorean Theorem to find the distance between two points that have different x-coordinates and different y- coordinates. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in two and three dimensions.
79	8	GEO	TAL Only	Volume of Cylinders, Cones, and Spheres	Understand the formula for the volume of a cylinder by comparing it to the volume of a prism. Understand the formula for the volume of a cone by comparing it to the volume of a cylinder. Understand the formula for the volume of a sphere by comparing it to the volume of a cylinder. Use the formulas for the volumes of cones, cylinders, and spheres to solve real-world and mathematical problems.