

all access

AVAILABLE FOR
GRADES 6-8 + ALG 1

[standards-based math curriculum]

BY MANEUVERING THE MIDDLE®



VOLUME UNIT
PACING GUIDE

DAY 1
Volume of Cylinders

DAY 2
Volume of Cones

DAY 3
Applying Volume of Cylinders and Cones

DAY 4
Volume of Spheres

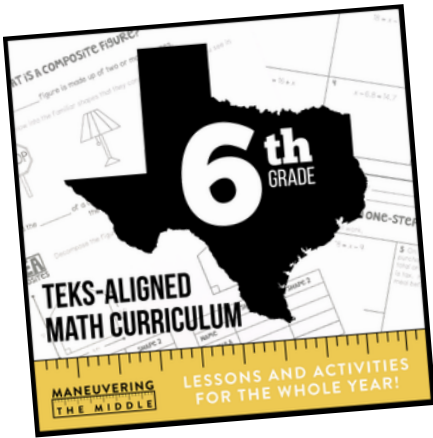
Applying Volume of Spheres

Student Handout 5

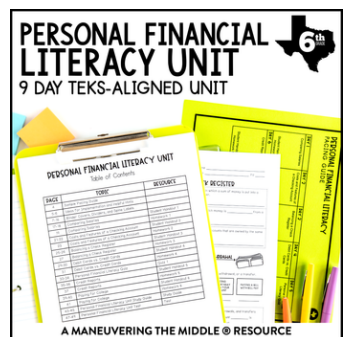
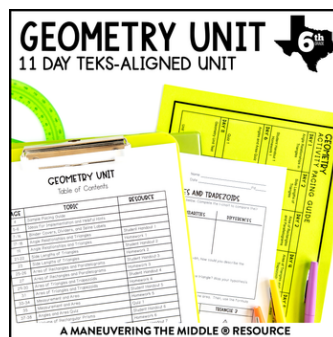
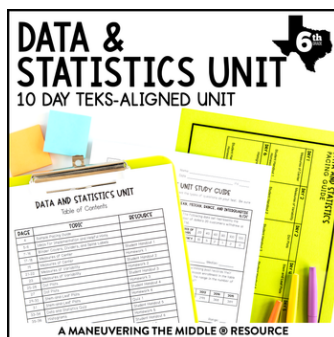
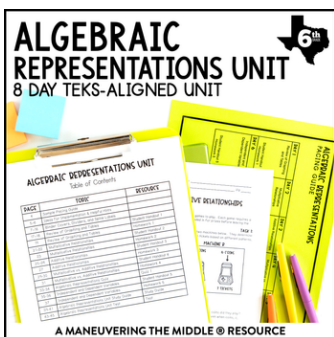
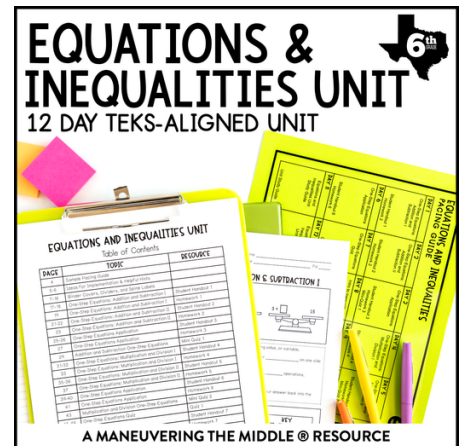
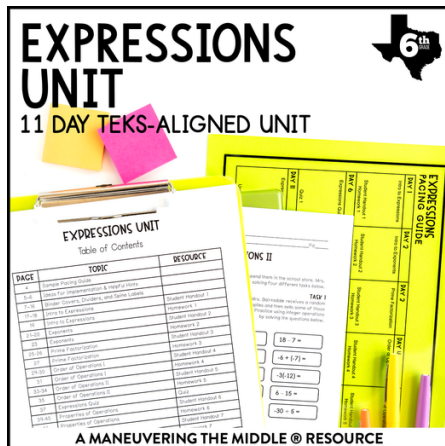
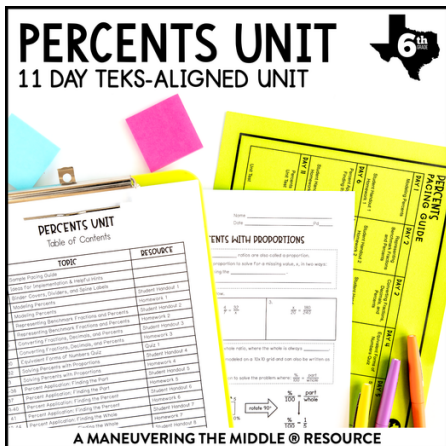
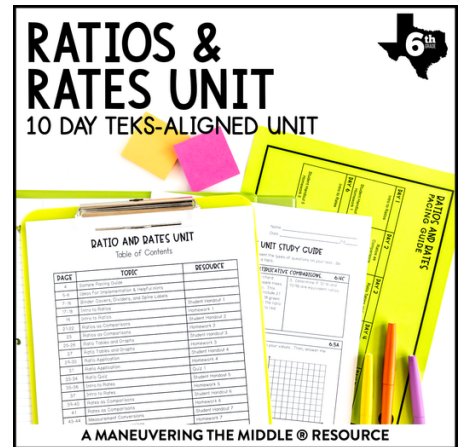
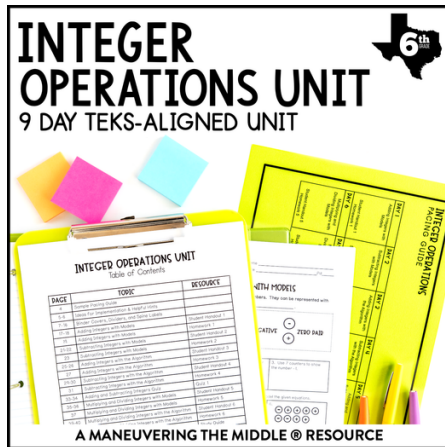
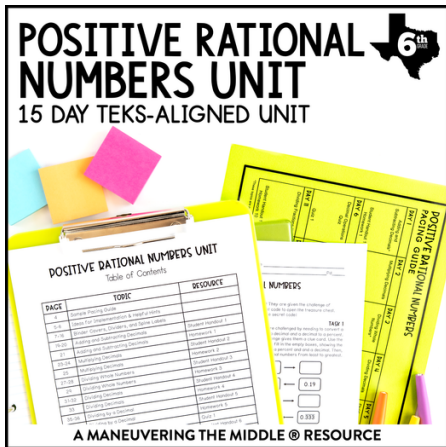
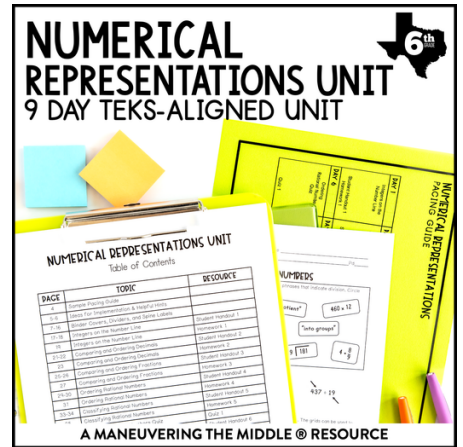


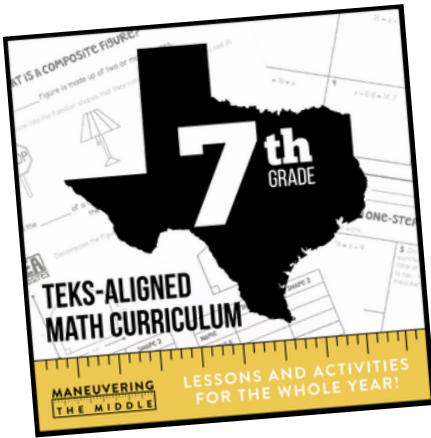
available for grades 6 - 8 + Algebra 1

A MANEUVERING THE MIDDLE® MEMBERSHIP

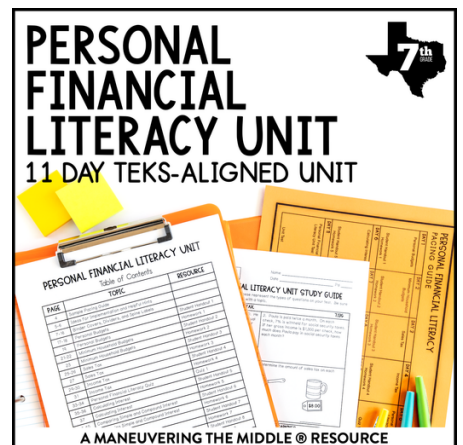
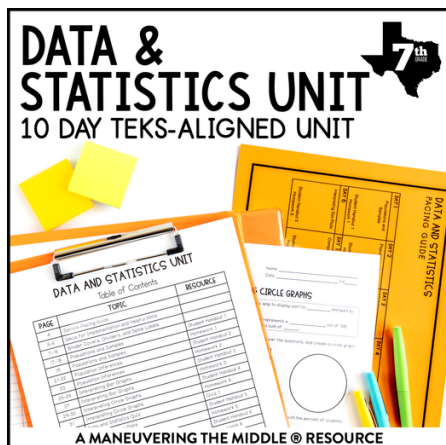
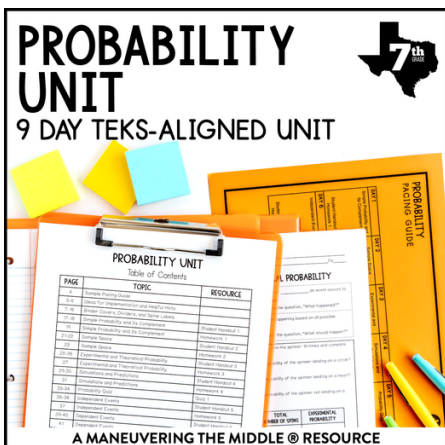
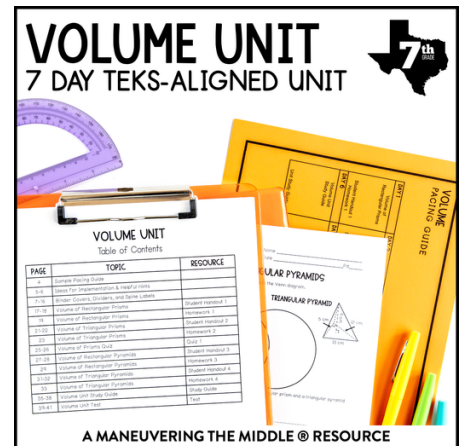
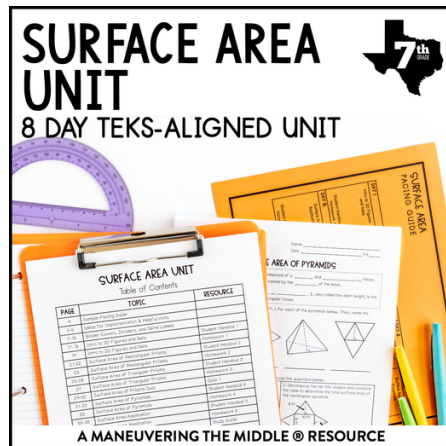
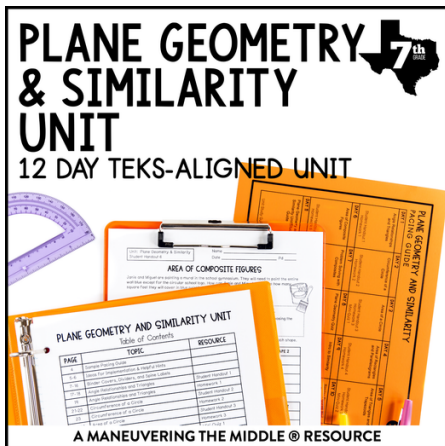
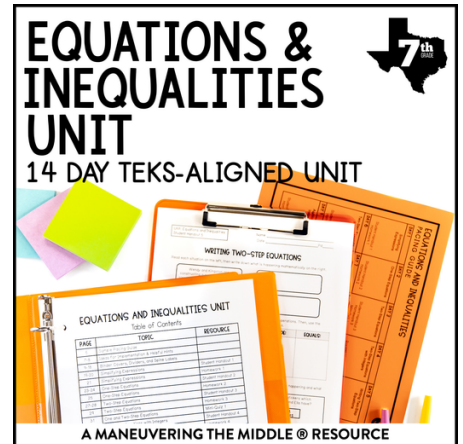
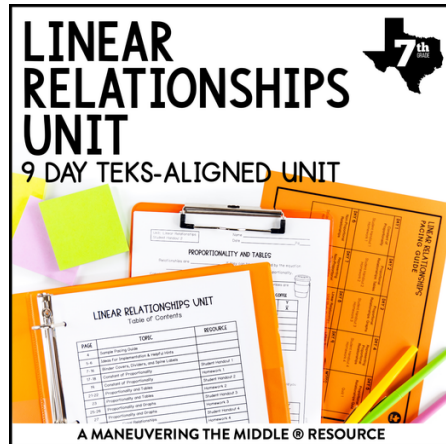
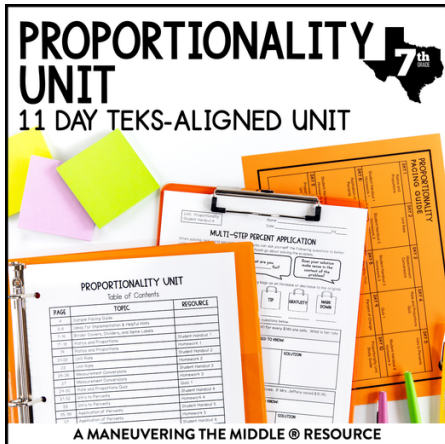
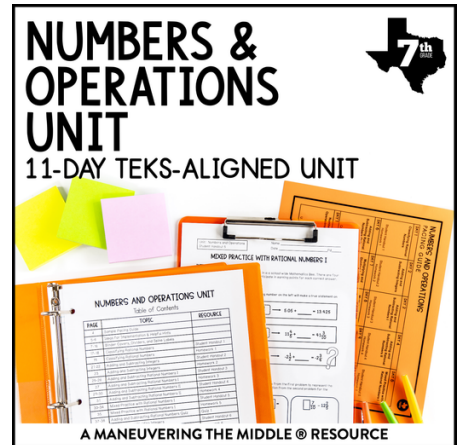


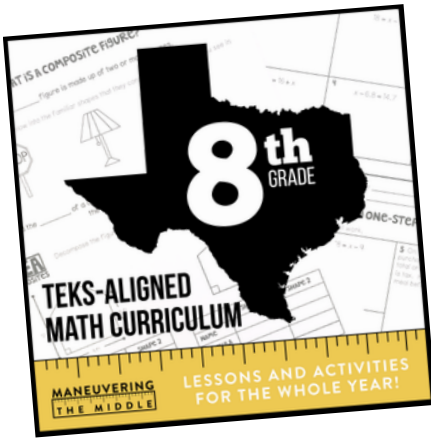
Sixth grade standards broken down into units that focus on scaffolded guided notes, hands-on classroom activities with unit overviews to support planning.



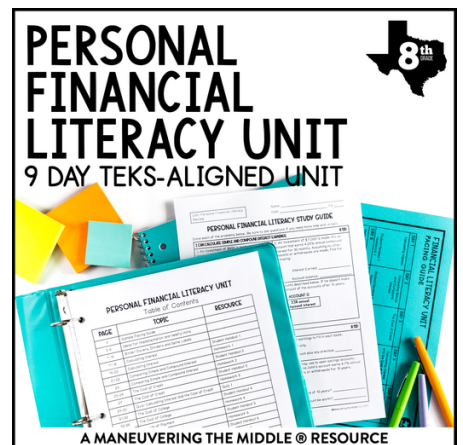
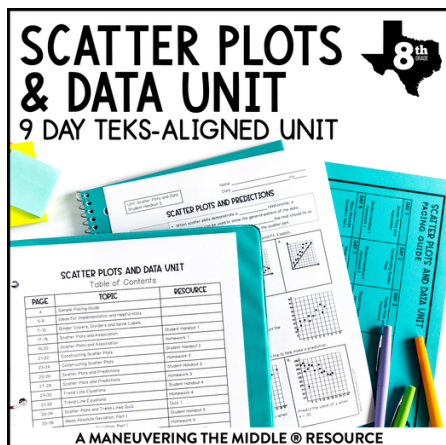
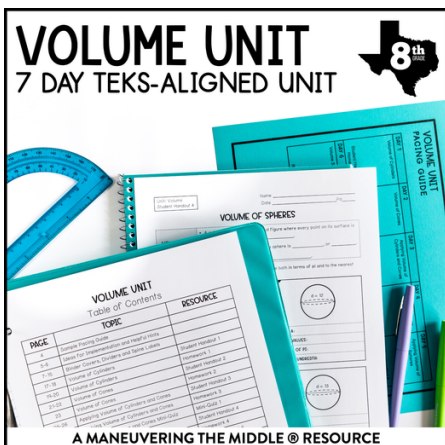
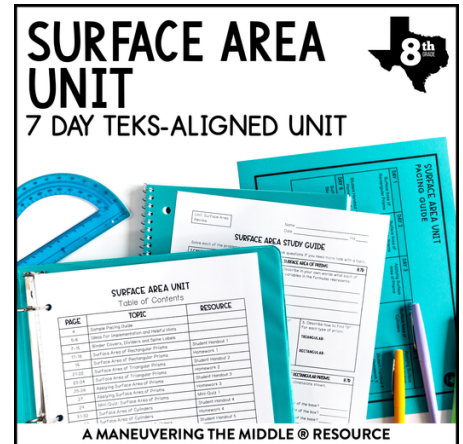
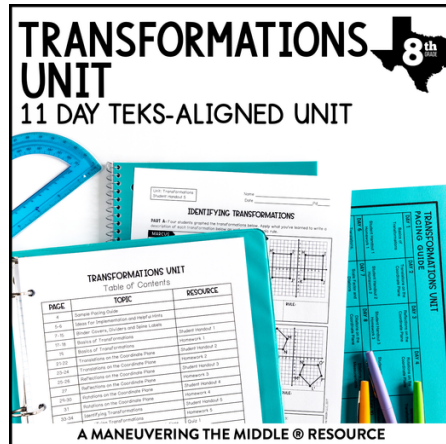
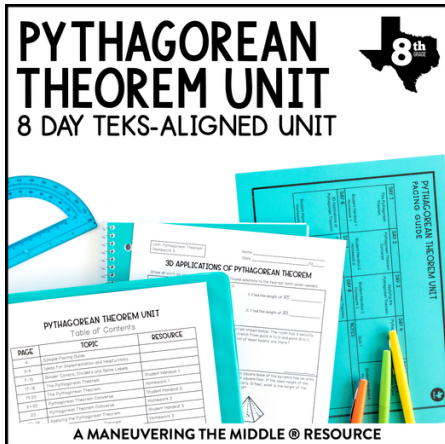
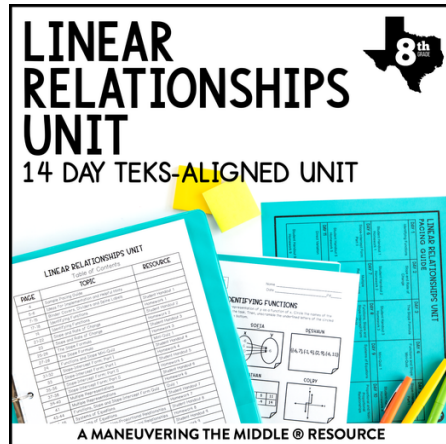
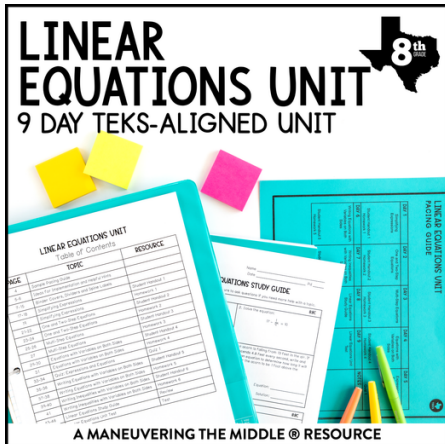
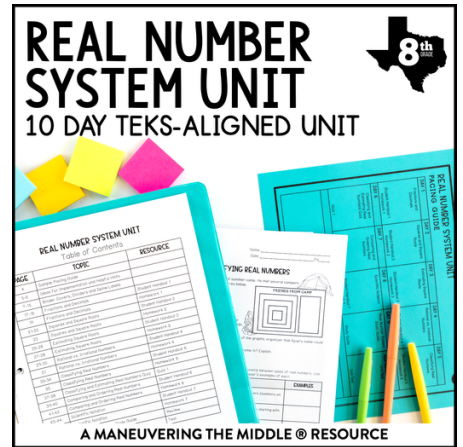


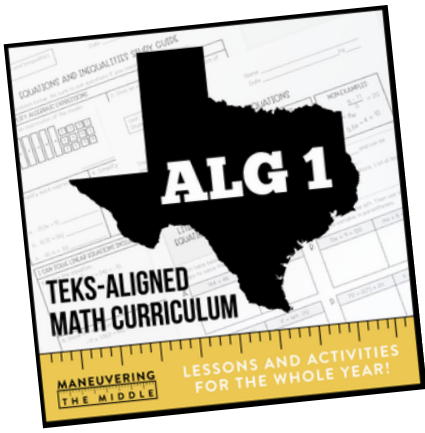
Seventh grade standards broken down into units that focus on scaffolded guided notes, hands-on classroom activities with unit overviews to support planning.



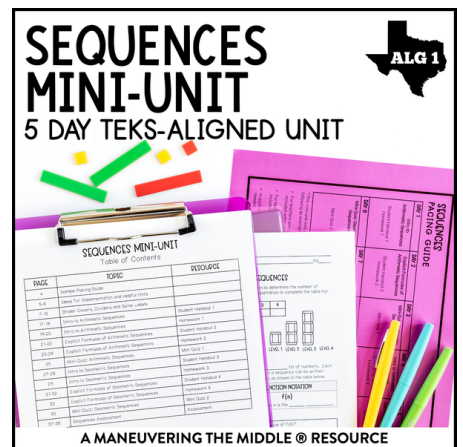
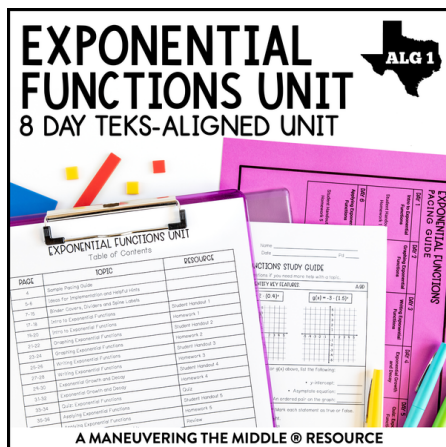
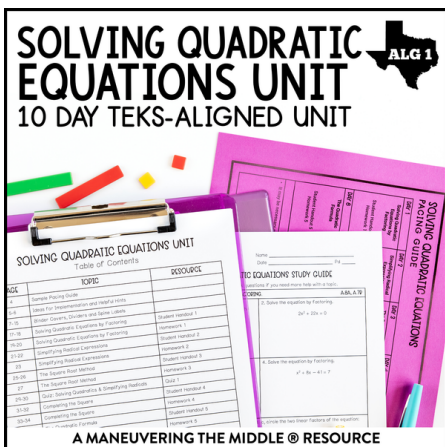
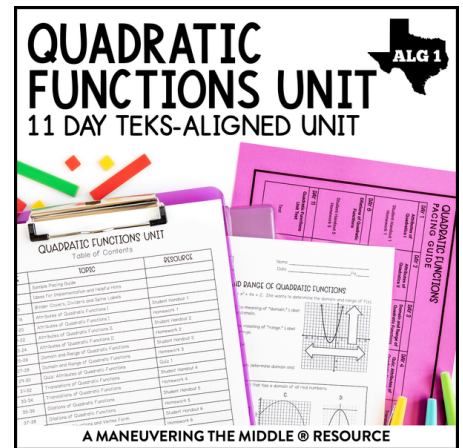
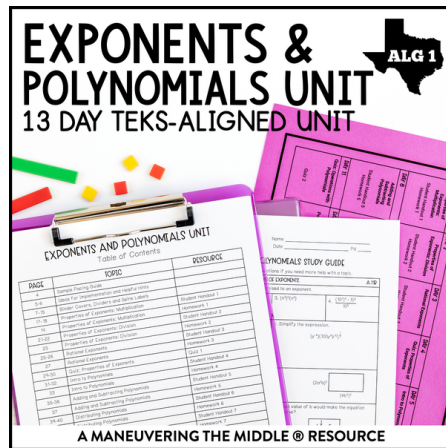
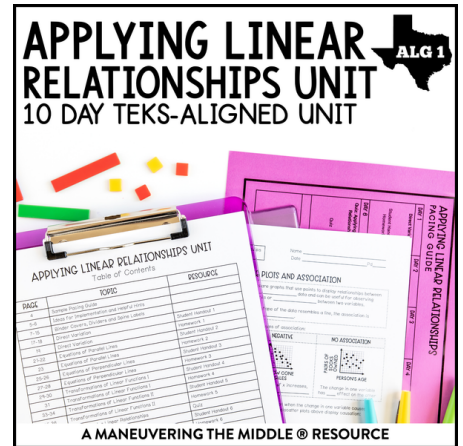
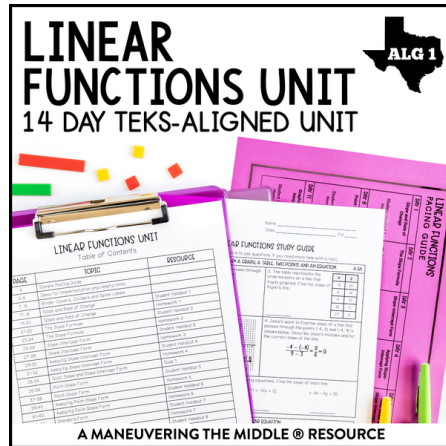
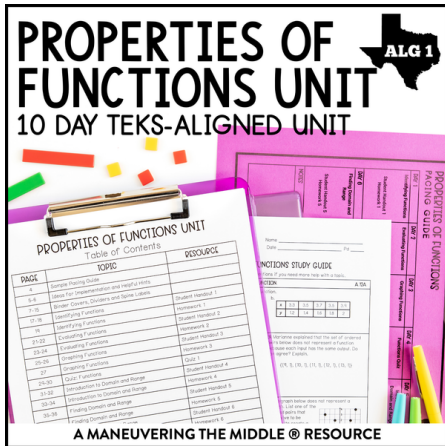
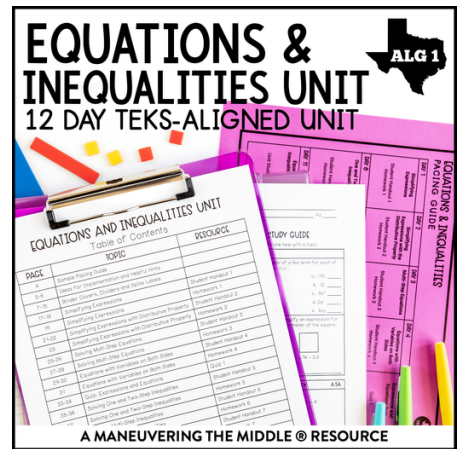


Eighth grade standards broken down into units that focus on scaffolded guided notes, hands-on classroom activities with unit overviews to support planning.





Algebra 1 standards broken down into units that focus on scaffolded guided notes, hands-on classroom activities with unit overviews to support planning.



unit overviews and planning guides

[standards, big ideas, essential questions, vertical alignment, vocabulary, common misconceptions]

EXPRESSIONS OVERVIEW



READINESS

6.7A Generate equivalent numerical expressions using order of operations, including whole number exponents, and prime factorization.

6.7D Generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties.

SUPPORTING

6.7B Distinguish between expressions and equations verbally, numerically, and algebraically.

6.7C Determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations.

BIG IDEAS

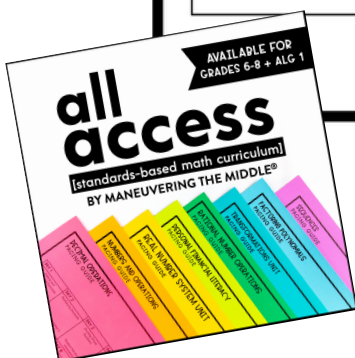
- Expressions are mathematical statements.
- Expressions can be translated into different forms and still remain equal.
- Expressions are used in real life to represent a process.

big ideas for teachers to focus on and communicate to students

ESSENTIAL QUESTIONS

- What process can you use to simplify an expression?
- Why do properties of operations exist?
- Why is there a process for simplifying an expression?

essential questions to provide a framework for learning



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perfect for team planning and providing background knowledge for teachers new to the content area

unit overviews and planning guides

[standards, big ideas, essential questions, vertical alignment, vocabulary, common misconceptions]

EXPRESSIONS OVERVIEW

VERTICAL ALIGNMENT

5TH GRADE	6TH GRADE	7TH GRADE
Simplify numerical expressions that do not involve exponents, including up to two levels of grouping (5.4F). Represent and solve multi-step problems using equations with a letter standing for the unknown quantity (5.4B).	Generate equivalent expressions using order of operations including whole number exponents, and prime factorization (6.7A). Distinguish between expressions and equations verbally, numerically, and algebraically (6.7B). Determine if two expressions are equivalent (6.7C). Generate equivalent expressions using the properties of operations (6.7D).	

KEY VOCABULARY

- associative property: numbers can be added or multiplied by moving the parentheses (grouping)
- commutative property: numbers can be added or multiplied in any order
- composite number: a whole number that can be divided by numbers other than 1 and its number with factors other than 1 and itself
- distributive property: terms within an expression can be expanded to form an equivalent expression
- equivalent: equal
- evaluate: to substitute a number for each variable and then perform the operations
- expression: a mathematical phrase with numbers, variables, and operators
- inverse property: the sum of a number and its opposite is 0; the product of a number and its reciprocal is 1
- identity property: the sum of a number and 0 is the number; the product of a number and 0 is 0
- prime: a number with factors of only 1 and itself
- prime factorization: the process of breaking down a number into all of its prime factors
- simplify: to determine an equal expression that is in a simpler form
- variable: an unknown quantity represented by a letter



®

bite-sized vertical alignment specific to the unit

student-friendly vocabulary to provide a common language for students

misconceptions that teachers want to be aware of



pacing calendars

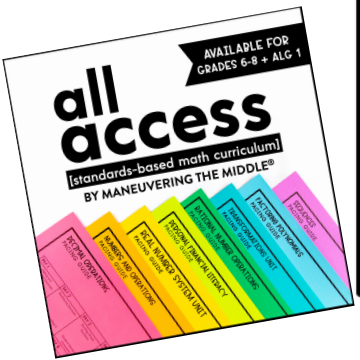
[sample pacing calendars to give a foundation for planning]

NUMERICAL REPRESENTATIONS ACTIVITY PACING GUIDE				
DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Integers on the Number Line Student Handout 1 Homework 1	Comparing and Ordering Decimals Student Handout 2 Homework 2	Comparing and Ordering Fractions Student Handout 3 Homework 3	Ordering Rational Numbers Student Handout 4 Homework 4	Activity: Comp Rational Num Task Cards Activity: Orde Rational Num Task Cards
DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
Activity: Sets and Subsets Intro	Classifying Rational Numbers Activity: Classifying Rational Numbers Mystery Picture Student Handout 5 Homework 5	Ordering Rational Numbers Quiz Quiz 1	Absolute Value Student Handout 6 Homework 6	Activity: Absolute Value Cut and Paste*
DAY 11	DAY 12	DAY 13	NOTES	
Activity: Numerical Representations Review Find It and Fix It*	Numerical Representations Study Guide	Numerical Representations Unit Test	The line up cards activity can be used throughout the unit to reinforce the number line.	

flexible in nature, but just enough structure to support teachers who are new to the content area

PERCENTS ACTIVITY PACING GUIDE				
DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Modeling Percents Student Handout 1 Homework 1	Representing Benchmark Fractions and Percents Activity: Benchmark Fractions and Percents Card Sort* Student Handout 2 Homework 2	Converting Fractions, Decimals, and Percents Activity: Converting Fractions, Decimals, and Percents Cards Student Handout 3 Homework 3	Activity: Equivalent Forms of Numbers Find It and Fix It*	Equivalent Forms of Numbers Quiz Quiz 1
DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
Activity: Modeling Percents Mat	Solving Percents with Proportions Student Handout 4 Homework 4	Activity: Percent of a Number Task Cards*	Percent Application: Finding the Part Student Handout 5 Homework 5	Percent Application: Finding the Percent Student Handout 6 Homework 6
DAY 11	DAY 12	DAY 13	DAY 14	DAY 15
Percent Application: Finding the Whole Student Handout 7 Homework 7	Activity: Percent Application He Said, She Said* Activity: Scavenger Hunt*	Mixed Practice with Percents Student Handout 8 Homework 8	Percents Unit Study Guide Activity: Percent Review Spin to 10 Unit Study Guide	Percents Unit Test Unit Test

hands-on activities placed for optimal practice and to help retain concepts



student handouts

[scaffolded and student-friendly guided notes to support instruction and real-life application of the concepts]

Unit: Transformations
Student Handout 4

Name _____
Date _____ Pd _____

ROTATIONS ON THE COORDINATE PLANE

ROTATIONS

- A rotation _____ a figure around a fixed point called the center of _____.
- For our examples, the center of rotation will be the _____, and we'll rotate in increments of _____.

DIRECTIONS AND DEGREES

- Figures can be rotated _____ or _____.
- Consider each quadrant a figure rotates as another 90° of rotation.



key vocabulary and key concepts are highlighted for students to reference

In 1-3, use the number of quadrants the figure was rotated to describe the degrees of rotation both clockwise and counterclockwise.

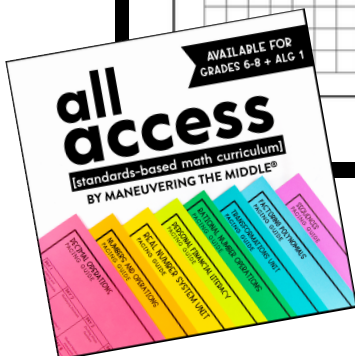
<p>1.</p> <p>_____ clockwise _____ counterclockwise</p>	<p>2.</p> <p>_____ clockwise _____ counterclockwise</p>	<p>3.</p> <p>_____ clockwise _____ counterclockwise</p>
-------------------------------------------------------------	-------------------------------------------------------------	-------------------------------------------------------------

4. Use the rotation of triangle ABC below to answer a-d.

<p>a. ABC was rotated _____ clockwise or _____ counterclockwise.</p>	<p>b. Complete the table.</p> <table border="1"> <thead> <tr> <th>PRE-IMAGE</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table> <p>c. Describe how the rotation affected the values in the ordered pairs.</p> <p>d. Write an algebraic rule for the rotation.</p>	PRE-IMAGE							
PRE-IMAGE									

connecting content to prior learning

scaffolded to support ELLs



streamline lesson planning and provide a standards-based foundation for teachers to utilize

student handouts

[scaffolded and student-friendly guided notes to support instruction and real-life application of the concepts]

In 1-3, dilate each rectangle by the given scale factor and record its new dimensions.

1. Scale factor = $\frac{2}{3}$ 35 inches 15 inches Dimensions: _____	2. Scale factor = 3.5 10 cm 22 cm Dimensions: _____	3. Scale factor = $\frac{5}{3}$ 30 ft 9 ft Dimensions: _____
--------------------------------------------------------------------------------	--------------------------------------------------------------	-----------------------------------------------------------------------

In 4-5, find the scale factor that was used to create each dilation.

4.
Scale factor: _____

5.

6. The squares shown below represent a dilation of a bathroom remodel, where tile A was dilated to tile B. The scale factor Mira found was $\frac{4}{7}$. Explain why the scale factor Mira found was incorrect and give the correct scale factor.

7. Jess is designing a custom rug for a client. The rug must have a width of 5 feet and a length of 5 feet. The client wants the rug's dimensions to not exceed 12 feet. Circle any of the scale factors that meet the customer's requests.

A SF: 1.2 B SF: 0.8 C SF: _____

Summarize today's lesson: _____

concepts are connected to real-world situations so students are able to apply their learning

Unit: Transformations
Student Handout 6

Name _____
Date _____ Pd _____

SCALE FACTOR AND DILATIONS

Harold and his friends went to a wizard camp where they took a class on spells and potions. Harold drank four potions in a row that caused him to grow or shrink based on the potion's scale factor. Note the effect that each potion had by writing "grow" or "shrink" under each table. Then, answer a-e.

POTION #1	POTION #2	POTION #3	POTION #4
INITIAL HEIGHT: 60 in	INITIAL HEIGHT: 30 in	INITIAL HEIGHT: 75 in	INITIAL HEIGHT: 15 in
SCALE FACTOR: $\frac{1}{2}$	SCALE FACTOR: 2.5	SCALE FACTOR: 0.2	SCALE FACTOR: $\frac{8}{3}$
NEW HEIGHT: 30 in	NEW HEIGHT: 75 in	NEW HEIGHT: 15 in	NEW HEIGHT: 40 in

a. Which scale factors made Harold grow? _____

b. Which scale factors made Harold shrink? _____

c. What do you notice about the difference in the scale factors listed in a and b? _____

d. Predict what would happen if someone drank a potion with a scale factor of 1. _____

e. Set up and simplify a ratio of the new height over the initial height for each potion. What do you notice?
#1: _____ #2: _____ #3: _____ #4: _____

Use your findings above to complete the information about scale factor and dilations below.

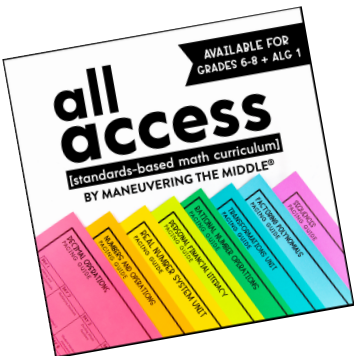
SCALE FACTOR

- Scale factor is a _____ of the corresponding sides in a figure: $\frac{\text{new}}{\text{original}}$ or $\frac{\text{image}}{\text{pre-image}}$
- If the scale factor is _____ than one, it will enlarge a figure.
- If the scale factor is _____ than one, it will reduce a figure.

DILATIONS

- A dilation is a transformation that either _____ or _____ the size of an original figure by a given scale factor.
- To dilate a figure, _____ its dimensions by the scale factor.

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questions requiring higher-level thinking

independent practice

[aligned homework to support each lesson]

short and manageable practice that supports each lesson

Unit: Number System
Homework 2

Name _____
Date _____ Pd _____


COMPARING AND ORDERING DECIMALS

Students were asked to create true statements about decimals. Circle the names of the student who correctly completed the task. Then unscramble the underlined letters of the circled name to answer the riddle at the bottom.

JADA

$-6.8 > -6.75$

STEVIE




A represents 0.85

ISAAC

-3.3 is closer to -3 than to -4

SUMMER



B is the best representation of -1.2

EVE

-4.04, -4.41, -4.79 are ordered from greatest to least

CLAYTON

TEAGAN

9.09, 9.9, 9.99, 99 are ordered from least to greatest

ANGEL

-17.92 < -16

WHAT WAS T-REX'S FAVORITE _____

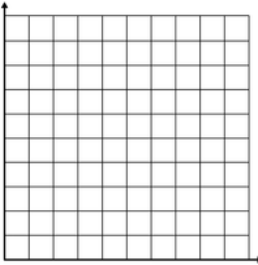
Unit: Equations & Inequalities
Homework 5

Name _____
Date _____ Pd _____

INDEPENDENT AND DEPENDENT VARIABLES

Complete the missing information in the chart below using the given verbal description.


GRAPH



TABLE

PROCESS	

VERBAL DESCRIPTION

 A baker can produce 40 cupcakes (c) every hour (h).

EQUATION

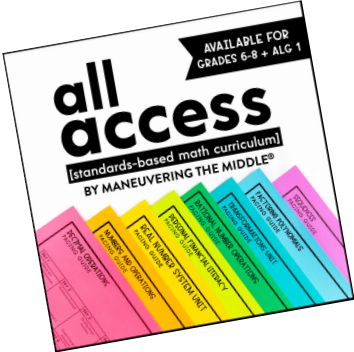
VARIABLES

Independent variable:
Dependent variable:

Use the information from the diagram above to answer the following questions about independent and dependent variables.

1. Write a sentence to explain the independent and dependent variables.	2. How many hours does it take to bake 280 cupcakes?
3. If the baker continued at the same rate, then how many cupcakes would she be able to make in 12.5 hours?	4. What does the ordered pair (5, 200) represent in this situation?

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classroom activities

[hands-on, engaging activities to support different grouping structures and levels of thinking]

A Find and fix the incorrect statement given the information on the number line.

#1: A
#2: Point B and D ha
#3: The opposite
#4: The opposite of

-FIND IT AND FIX IT-
error analysis activity
to support higher level
thinking skills

f Jim, Scarlet, and Olivia are reading a book for English class. Jim has read $\frac{5}{6}$ of the book, Scarlet has read $\frac{3}{8}$ of the book, and Olivia has read $\frac{1}{2}$ of the book.

Find and fix the incorrect statement.

#1: Jim has read the most pages.
#2: Olivia has read the fewest pages.
#3: Scarlet has over half of the book left to finish.
#4: Olivia has read 50% of the book.

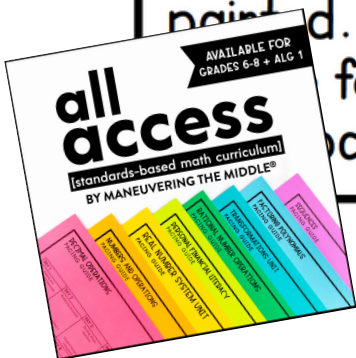
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C An entrance sign is shaped like a trapezoid. It is being painted. How many feet will need painted?

84

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-SCAVENGER HUNTS-
students are up and
moving as they work
problems and search
for the correct solution



students collaborating together to practice in an engaging way

classroom activities

[hands-on, engaging activities to support different grouping structures and levels of thinking]

CARD 1:

A carnival sold 450 tickets on Saturday. The ticket sales showed that 126 of the ticket sales were adult tickets. What percent of the tickets sold on Saturday were adult tickets?



Albert says that 28% of the tickets were adult tickets.

"HE SAID, SHE SAID"- students analyze a question and compare two different possible responses

CARD 6:

Jerome and his brother stayed at the carnival from 4 PM to 8 PM. They spent 90 minutes watching the magic show.

What percent of the evening did they spend at the magic show?



Finn says that they spent 37.5% of their time watching the show.

Flora says that they spent $33.\bar{3}$ % of their time watching the show.

-SOLVE AND COLOR-
spice up basic practice with a coloring page



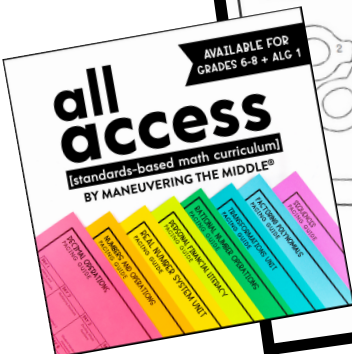
Unit: Functions Solve and Color Name _____ Pd _____
Date _____ Pd _____

FUNCTIONS SOLVE AND COLOR

For each problem below, compare the rate of change for both A and B. Decide which rate of change is greater, and color the numbers according to the key.

WHICH HAS THE GREATEST RATE OF CHANGE?		COLOR KEY												
1:A	<table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-3</td><td>$-\frac{1}{4}$</td></tr> <tr><td>-1</td><td>$-\frac{3}{4}$</td></tr> <tr><td>1</td><td>$\frac{3}{4}$</td></tr> <tr><td>3</td><td>$-\frac{1}{2}$</td></tr> </table>	x	y	-3	$-\frac{1}{4}$	-1	$-\frac{3}{4}$	1	$\frac{3}{4}$	3	$-\frac{1}{2}$	1:B		A: BLUE B: GREEN
x	y													
-3	$-\frac{1}{4}$													
-1	$-\frac{3}{4}$													
1	$\frac{3}{4}$													
3	$-\frac{1}{2}$													
2:A	Dominick's puppy weighs 8 pounds and is gaining about $\frac{3}{4}$ pounds each week.	2:B	$y = \frac{3}{2}x + 9$	A: RED B: YELLOW										
3:A	$2y - 8x = 16$	3:B		A: ORANGE B: PINK										
4:A	<table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>4</td><td>184</td></tr> <tr><td>6</td><td>270</td></tr> <tr><td>8</td><td>356</td></tr> <tr><td>10</td><td>442</td></tr> </table>	x	y	4	184	6	270	8	356	10	442	4:B	Terri needs \$250 to buy Christmas gifts this year. She has \$75 saved already, and she is saving \$45 each week.	A: BROWN B: PURPLE
x	y													
4	184													
6	270													
8	356													
10	442													

©Maneuvering the Middle, 2017



classroom activities

[hands-on, engaging activities to support different grouping structures and levels of thinking]

DOMAIN:

A $-8 < x < 8$	D all real numbers	C $x \geq -6$
D $4 \leq x \leq 14$	E $\{-4, -1, 1, 3\}$	F $x \leq 3$
G $-4 \leq x < 3$	H $4 < x < 14$	I $\{-8, -4, 1\}$
J $x > -6$	K $x < 3$	L all real num

RANGE:

M $y \leq 3$	N all real numbers	O $\{-4, -3, 0\}$
P $\{-2, -1, 0, 2\}$	Q $y \geq -5$	R $2 \leq y < 4$
S $y \geq -2$	T $-2 < y < 2$	U $y > -2$
	V $y \leq -2$	X $-4 < y \leq 4$

-CUT AND PASTE-
students practice with
a self-checking page

Unit: Properties of Functions
Cut and Paste

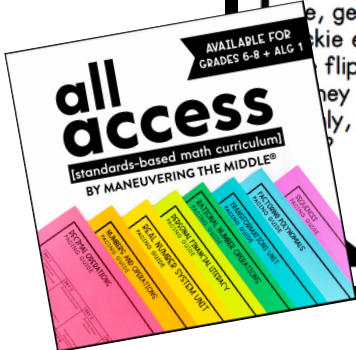
Name _____
Date _____ Pd _____

DOMAIN AND RANGE

Cut and paste the domain and range for each function in the appropriate boxes.

1	2	3
[DOMAIN]	[DOMAIN]	[DOMAIN]
[RANGE]	[RANGE]	[RANGE]
4	5	6
[DOMAIN]	[DOMAIN]	[DOMAIN]
[RANGE]	[RANGE]	[RANGE]

<p>Sunscreen is priced at \$10.00 per bottle, plus 8% tax. If Tonya purchases a bottle of sunscreen with a \$20.00 bill, then what is her change?</p> <p>1</p>	<p>Baby pools are not selling well at Sam's. So, he decides to put them on clearance for \$19.99, plus an extra 20% off. Approximately how much will a baby pool cost?</p> <p>2</p>
<p>Flip-flop sets are on sale at buy one, get one half-off. Maria and Tonya each decide to get a pair. If flip-flops are priced at \$24.00, how much do they decide to split the total cost? If they split it equally, then how much will each person pay?</p> <p>3</p>	<p>Men's swim trunks are marked at \$42.00. Approximately how much will the 6% sales tax be on a pair of swim trunks?</p> <p>4</p>

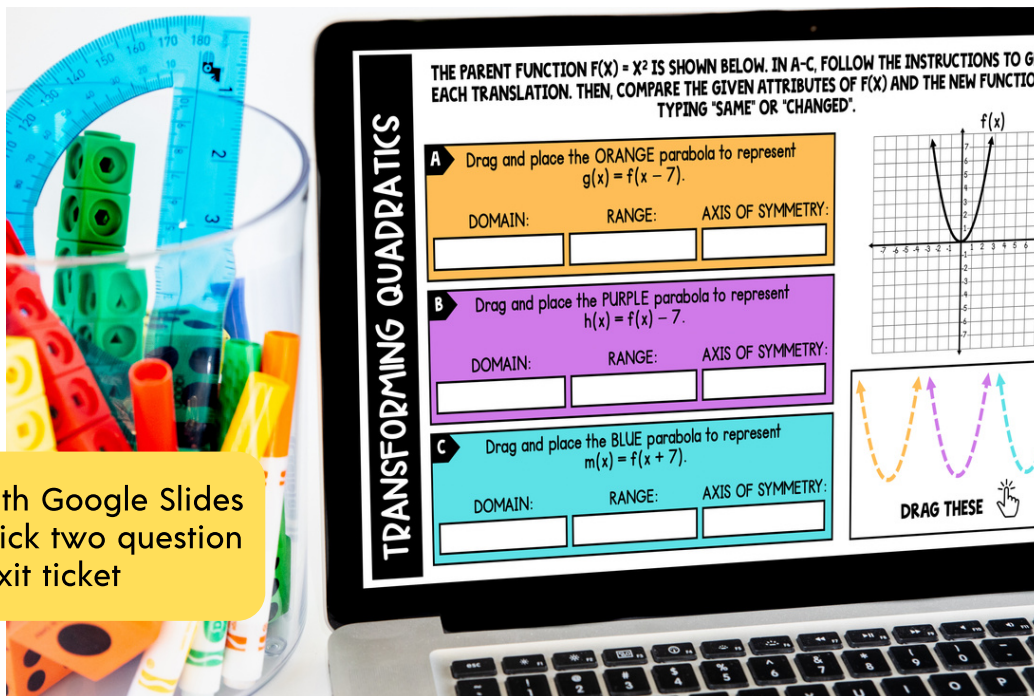


-TASK CARDS-
flexible question cards
can be used in centers,
for small groups, and
collaboration

supplemental digital activities

[interactive engaging practice that can be used with Google Slides or Microsoft PowerPoint]

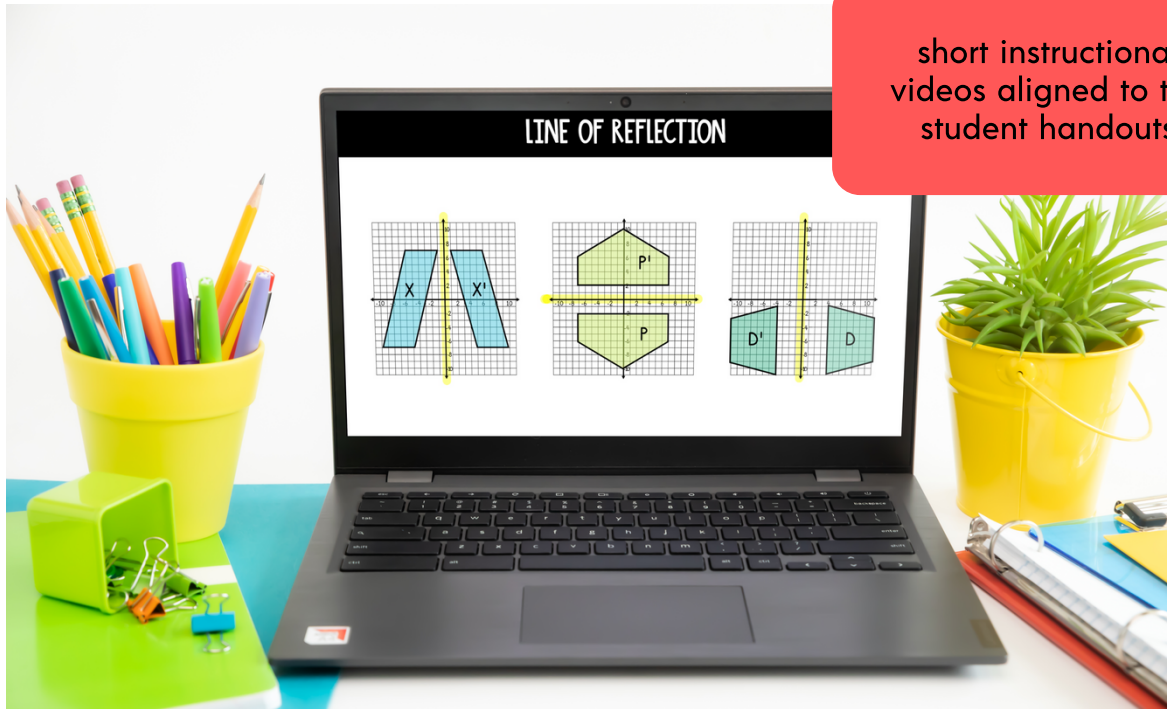
interactive, drag and match activities to support higher level thinking skills



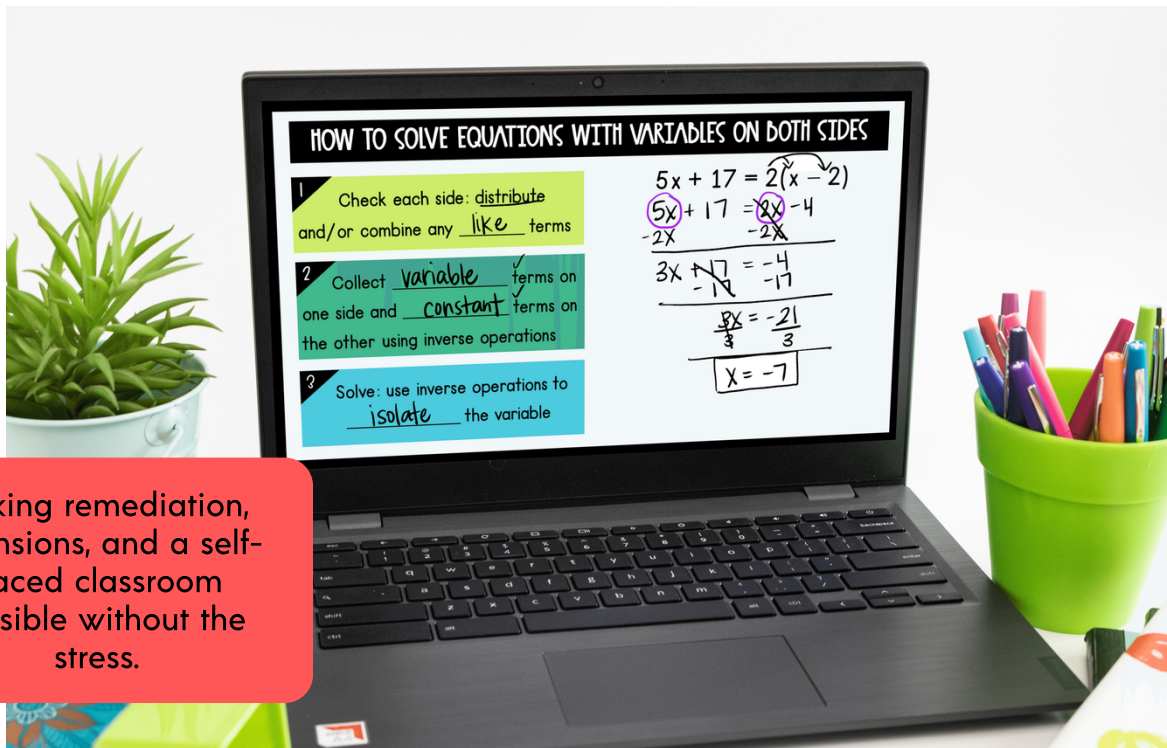
for use with Google Slides or PPT, quick two question exit ticket

student video library

[coming September 2021]



short instructional videos aligned to the student handouts



Making remediation, extensions, and a self-paced classroom possible without the stress.

unit review and assessments

[aligned and standards-based unit assessments]

Unit: Data & Statistics
Test

Name _____
Date _____ Pd _____

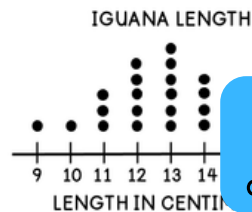
DATA & STATISTICS UNIT TEST

Solve the problems below. Be sure to show your thinking.

1. A grocery store polls every twentieth customer to determine if they are satisfied with the cleanliness of the store. Forty customers are surveyed, and 26 are satisfied. What conclusion can be drawn for the 800 daily customers?

- A. 65% of the customers are unsatisfied with the cleanliness of the store.
- B. Of the 800 customers, 520 would be satisfied with the cleanliness of the store.
- C. 40% of the customers are satisfied with the cleanliness of the store.
- D. 25% of the customers are not satisfied with the cleanliness of the store.

2. At the zoo, the length of each iguana is measured. Which statement is best supported by the information below?



- A. Over half of the iguanas measure 14 centimeters or more in length.
- B. 25% of the iguanas measure 12 centimeters in length.
- C. The number of iguanas that measure 15 centimeters or more is equal to the number that measure 11 centimeters or less.

both multiple choice and open-ended questions are included

rigorous questions that help prepare students for state assessments

3. 40 students from each grade level were surveyed regarding their preference for a location. Use the table below to answer questions 3-4.

	ZOO	MUSEUM	SPORTS COMPLEX
7 TH GRADE	12	18	10
8 TH GRADE	14	19	7

3. If there are 220 members of the 7th grade class, then how many students can be expected to prefer the zoo?

- A. 39
- B. 48
- C. 120
- D. 66

4. If there are 180 members of the 8th grade class, then what percent preferred either the museum or the sports complex?

- A. 65%
- B. 47.5%
- C. 17.5%
- D. 26%

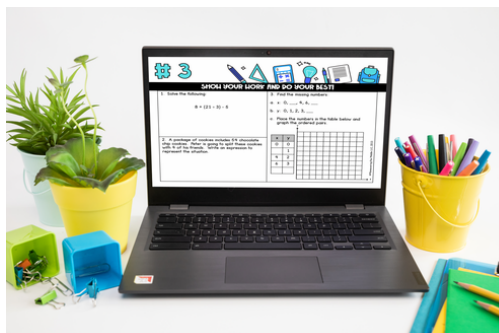
editable assessment version allows for modifications



aligned assessment both in print and digital (Google Forms) to minimize grading and maximize the ability to disaggregate data

+ more!

Additionally, these resources are also included as part of
MTM All Access



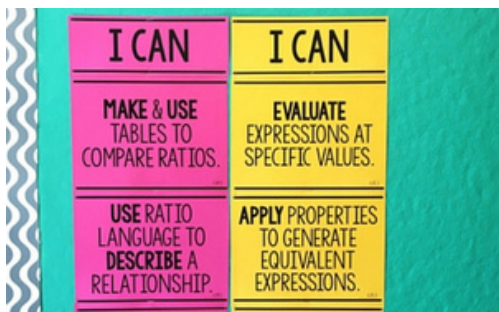
warm-ups

Spiraled bell ringers for an entire year



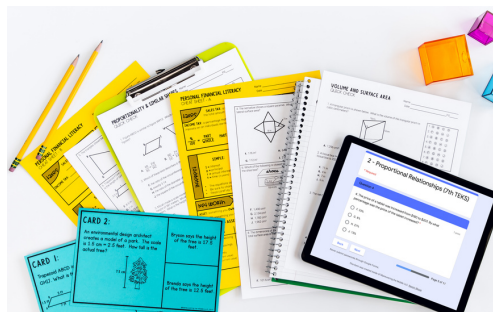
back to school activities

Start the school year by reviewing important math skills



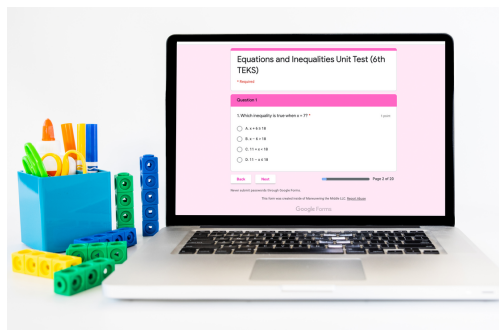
"i can" statements

Student friendly language to describe the standards



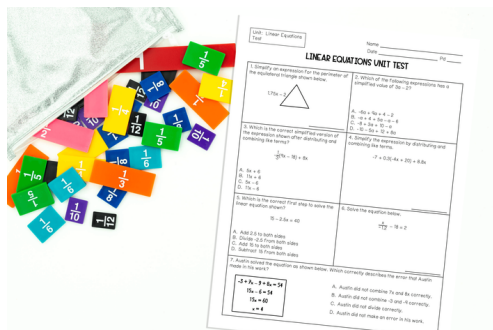
test prep unit

Prepare for state testing with mini lessons, quick checks, & activities



self-grading assessments

Tests and quizzes in Google Forms



year end assessments

Review, assess or practice test-taking skills with your students

all access

[standards-based math curriculum]

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AS LONG AS YOU ARE AN
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- 40+ supplemental digital activities + exit tickets
- daily spiral review bell-ringers
- complete test prep review unit
- year-end assessments
- unique teacher login
- *New* student video library (videos begin rolling out in September 2021)

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- OR -
CHOOSE ALL GRADES (6TH-ALG 1)

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- administrator access to manage licenses and view content

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OF TEACHERS USING EACH GRADE
LEVEL OF CONTENT

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pay by credit card or purchase order

all access

AVAILABLE FOR
GRADES 6-8 + ALG 1

[standards-based math curriculum]

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