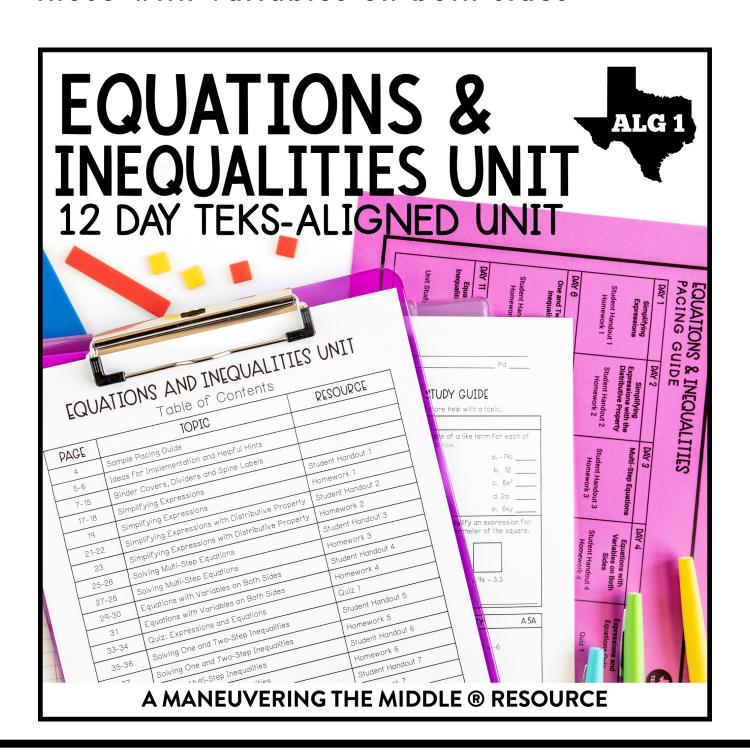
## learning focus:

- solve multi-step linear equations including those with variables on both sides
- √ solve literal equations for a specified variable
- solve multi-step linear inequalities including those with variables on both sides





a 12 day TEKS-aligned unit TEKS: A.5A, A.5B, A.12E

## ready-to-go, scaffolded student materials

### EQUATIONS AND INEQUALITIES UNIT

Table of Contents

PAGE	TOPIC	RESOURCE
4	Sample Pacing Guide	
5-6	Ideas for Implementation and Helpful Hints	
7-15	Binder Covers, Dividers and Spine Labels	
17-18	Simplifying Expressions	Student Handout 1
19	Simplifying Expressions	Homework 1
21-22	Simplifying Expressions with Distributive Property	Student Handout 2
23	Simplifying Expressions with Distributive Property	Homework 2
25-26	Solving Multi-Step Equations	Student Handout 3
27-28	Solving Multi-Step Equations	Homework 3
29-30	Equations with Variables on Both Sides	Student Handout 4
31	Equations with Variables on Both Sides	Homework 4
33-34	Quiz: Expressions and Equations	Quiz 1
35-36	Solving One and Two-Step Inequalities	Student Handout 5
37	Solving One and Two-Step Inequalities	Homework 5
39-40	Solving Multi-Step Inequalities	Student Handout 6
41	Solving Multi-Step Inequalities	Homework 6
43-44	Inequalities with Variables on Both Sides	Student Handout 7
45	Inequalities with Variables on Both Sides	Homework 7
47-48	Quiz: Inequalities	Quiz 2
49-50	Literal Equations	Student Handout 8
51	Literal Equations	Homework 8
53-55	Equations and Inequalities Study Guide	Review
57-59	Equations and Inequalities Unit Test	Test

@Maneuvering the Middle LLC, 2020

A MANEUVERING THE MIDDLE® RESOURCE



a 12 day TEKS-aligned unit TEKS: A.5A, A.5B, A.12E

# student friendly + real-world application

Unit: Equations and Inequalities Student Handout 2  SIMPLIFYING EXPRESSION  a. Write in words the meaning of 3(12).	Name	ERTY	scaffolded concepts
<ul> <li>c. Use algebra tiles to sketch 3(x – 4). The write the simplified expression.</li> <li>The distributive p</li> </ul>	Simplify the expressions by distributin  6. 7. 16x + 5.6(2x - 11)	g and combining like terms, if necessary.   8. $13(1.4 + 2w) \qquad \qquad \frac{3}{4}(16m - 5) -$	3 2
DISTRIPUTIVE PROPERTY  • Algebraically, we a() • Be careful with you using the distributive property, simplify the second secon	q.  15.4 – 5.2(3f + 1.2)  11. Shondra simplified the following ex but made an error. Describe her mist and then correctly simplify the expres  26.7 – 6.3(6x – 10.1) 26.7 – 37.8x – 63.63 –37.8x – 36.93  13. Oscar is painting a wall with the fodimensions. Write the simplified expr for the area of the wall.  40.5  8.3w + 2	Each of the cards on the left simpli	-22.8 + 0.6(2x +23)
self-checking practice		2. Card B and Card  3. Card C and Card  4. Card D and Card	simplify to the expression  simplify to the expression  simplify to the expression  simplify to the expression  simplify to the expression



12 day TEKS-aligned unit

TEKS: A.5A, A.5B, A.12E

## streamline your planning process with unit overviews

#### EQUATIONS AND INEQUALITIES OVERVIEW



#### STANDARDS

those for which the application of the distributive property is necessary and for which variables are included on both sides variables are included on both sides

*PEADINESS* 

SUPPORTING A.5B solve linear inequalities in one variable including those for which the application of the distributive property is necessary and for which

A.12E solve mathematic and scientific formulas, and other literal equations, for a specified variable



√ key vocabulary

vertical alignment

#### **PIG IDEAS**

- Equations are two mathem or infinite solutions
- Equations and inequalities of
- Expressions, equations, and problems

#### **ESSENTIAL QUESTIONS**

- How can expressions, equa
- · What determines when an e

DAY 6

DAY 11

One and Two-Step

Inequalities

Student Handout 5

Homework 5

Inequalities Review

Unit Study Guide

· What are the benefits of rep

#### **EQUATIONS & INEQUALITIES** PACING GUIDE

DAY 7

DAY 12

Multi-Step Inequalities

Student Handout 6

Homework 6

Inequalities Test



DAY 4 DAY 1 DAY 5 Simplifying Simplifying Multi-Step Equations Equations with Expressions and Expressions with the Variables on Both Equations Quiz Expressions Distributive Property Sides Student Handout 1 Student Handout 2 Homework 1

sample pacing calendar



Student Handout 3 Studen	nt Handout A				
EQUATIONS & INEQUALITIES OVERVIEW					
TOPIC	TEACHING TIPS				
	Write several different types of terms on the board. Ask two students to come up to the board with a fly swatter. When you call out a term, the first student to "swat" a like term wins a point for the team. Continue with other students. Keep score if your students can handle it.   Output  Description:				
Simplifying Expressions	Give each student a lanyard with various terms written (2x, 2y, 2x², etc.) and ask them to find their families. Students will then attempt to group up based on various characteristics, typically by like terms. If they are incorrect, have them keep trying. If they are correct, have them find the rest of their family members. This great idea was shared by a friend and reader, Kayla.				
	Using colored pencils or shapes to group like terms is helpful for introducing this concept and for students who are struggling. A t-chart can also help organize work.				
	Watch for students who struggle to remember the coefficient of 1 in front of a lone variable.				
	Consider using a box method to model the distributive property. Algebra tiles work great, too!				
	Start by displaying a very long and complex equation on the board. Explain that today you are laying the foundation for these types of equations.				
	Whiteboard races, markers, and graffiti activities are all great ideas to spice up practice. Search <u>www.maneuveringthemiddle.com</u> for the post called "Turn Any Worksheet into an Activity" for more details and ideas.				

teaching ideas

Solving Equations

If you choose to use algebra tiles as a model, then make sure that students understand the concept of zero pairs. You can find more information about algebra tiles here: www.maneuveringthemiddle.com/why-you-should-use-algebra-tiles

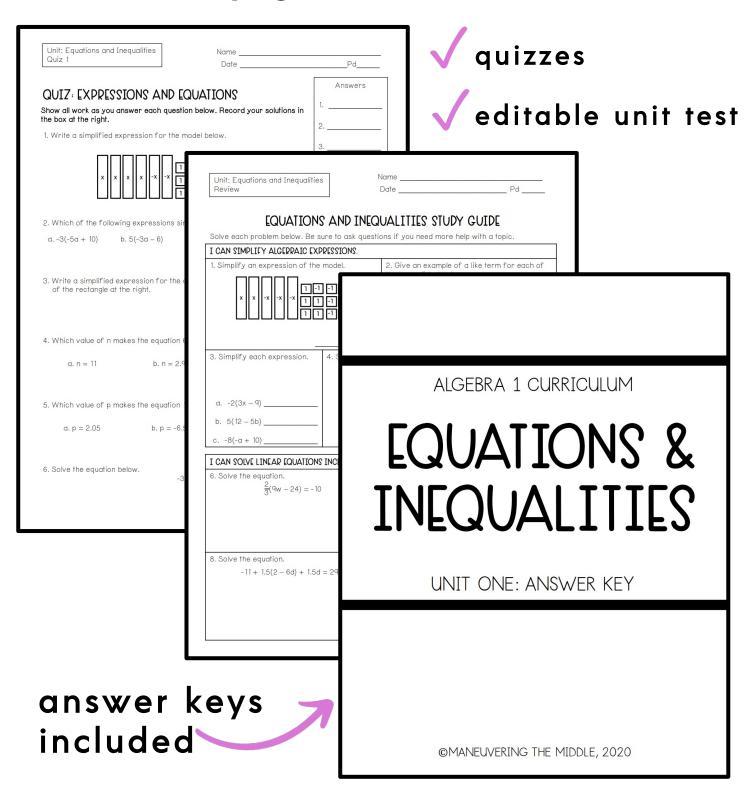
- Make sure to actually say " $2 \, \text{times} \, x \, \text{equals} \, 5''$  which helps remind students what operation is happening between the  $2 \, \text{and} \, \text{the} \, x$ .



a 12 day TEKS-aligned unit

TEKS: A.5A, A.5B, A.12E

### unit study guide + assessments



A MANEUVERING THE MIDDLE® RESOURCE