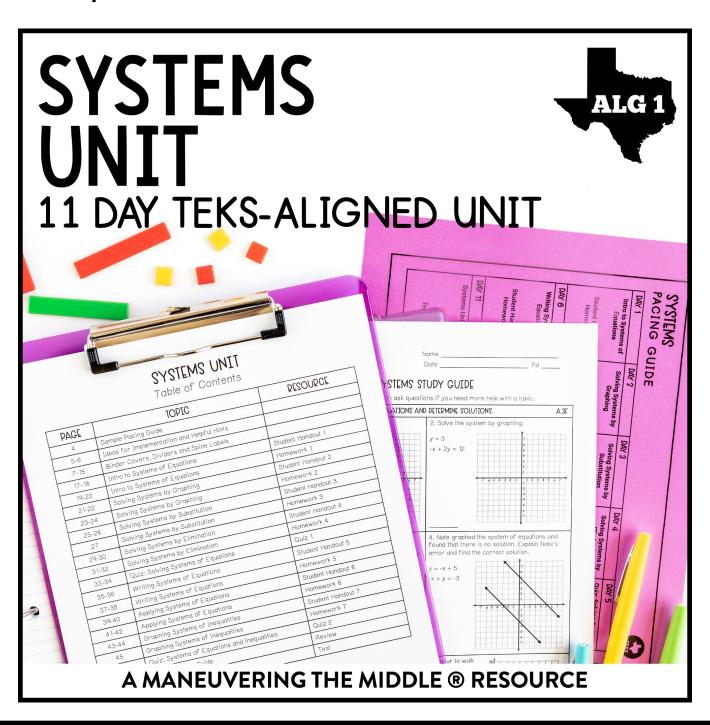
learning focus:

- solve systems of two linear equations by graphing, substitution, and elimination
- write and graph systems of two linear equations for real-world situations
- graph the solution set of a system of linear inequalities





an 11 day TEKS-aligned unit TEKS: A.21, A.3F, A.3G, A.3H, A.5C

ready-to-go, scaffolded student materials

SYSTEMS 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	Intro to Systems of Equations	Student Handout 1
19-20	Intro to Systems of Equations	Homework 1
21-22	Solving Systems by Graphing	Student Handout 2
23-24	Solving Systems by Graphing	Homework 2
25-26	Solving Systems by Substitution	Student Handout 3
27	Solving Systems by Substitution	Homework 3
29-30	Solving Systems by Elimination	Student Handout 4
31-32	Solving Systems by Elimination	Homework 4
33-34	Quiz: Solving Systems of Equations	Quiz 1
35-36	Writing Systems of Equations	Student Handout 5
37-38	Writing Systems of Equations	Homework 5
39-40	Applying Systems of Equations	Student Handout 6
41-42	Applying Systems of Equations	Homework 6
43-44	Graphing Systems of Inequalities	Student Handout 7
45	Graphing Systems of Inequalities	Homework 7
47-48	Quiz: Systems of Equations and Inequalities	Quiz 2
49-51	Systems Study Guide	Review
53-55	Systems Unit Test	Test

©Maneuvering the Middle LLC, 2020



an 11 day TEKS-aligned unit TEKS: A.21, A.3F, A.3G, A.3H, A.5C

student friendly + real-world application

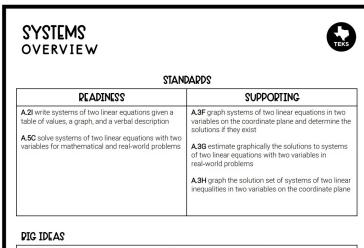
Ava and Amy are sisters who make video	esents this 20 18 18	concepts	
 b. Check your solution by plugging (x, y) in equations. Was your estimation correct. c. Discuss some of the disadvantages of siby graphing. 	Use the substitution method to solve 4. $3x - y = 4$ $3y = 9x - 12$ 5.		
STEPS TO SOLVE SYSTEMS PY SUPSTITUTION Use the substitution method to solve the fol 1. Find the number of minutes each sister did your graphing estimation compare to the state of the substitution method to solve the fol 2. 5x + y = 34 y = 2x - 1	Use your knowledge of substitution to 7. Fish 'n Fins sells clown fish and cost \$2.00. At the end of the day, Firepresent the number of clown fish number of each fish that was sold a situation. x + y = 156 1.5x + 2y = 260 8. Use the system shown on the gradary of the system of equations. b. Using the substitution method, find	y = 4x - 21 $y = -6x - 2$ 8x - 4x - 21 $y = -6x - 2$ $x = -6x - 2$ $y = -6x - 2$ $x = -6x - 2$ $y = -6x - 2$ $x = -6x - 2$ x	
self-chec practice	c. Explain when it is advantageous the solution to a system of equate	A piggy bank holds \$4.40 in quarters and dimes. There are 20 coins in the bank. Let x be the number of dimes and y be the number of quarters. Find the number of each coin in the bank.	backage weighs tems inside. The and the chips by magazines, x,



an 11 day TEKS-aligned unit

TEKS: A.21, A.3F, A.3G, A.3H, A.5C

streamline your planning process with unit overviews





vertical alignment

- Systems of equations can be used to solve mathematical and real-world problems, and they can be
- · Systems of equations can h
- · The solution set to systems

ESSENTIAL QUESTIONS

- · How does graphing a syste
- What is meant by the "solut
- How can you write a systen · When would you be more lil
- How can you determine the

teaching

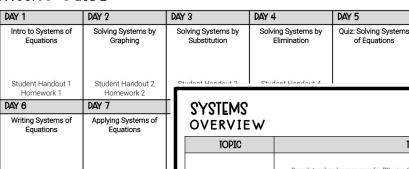
ideas

SYSTEMS PACING GUIDE

Student Handout 5

Systems Unit Test

DAY 11



Student Handout 6

sample pacing calendar



TOPIC	TEACHING TIPS
Intro to Systems of Equations	Search teacher desmos.com for "Playing Catch-Up" as an engaging way to introduce the concepts of systems of equations as well as the fact that systems can be represented using graphs, tables and equations.
Solving Systems by	Consider allowing time during or after this lesson to show students how to graph and solve a system of equations on their graphing calculator.
Graphing	It may be helpful to explain to students that solving by graphing is often considered a tool to "estimate" a solution to a system since many times the point of intersection is not at whole numbers.

Solving Systems by Substitution

It can be difficult for students to keep track of their work during this lesson. I like to have students use highlighters to highlight their variables in order to see exactly what is being substituted, and where

Be sure that students understand the vocabulary of "opposite coefficients" so they have a clear

This is a link to a game similar to "Who Wants to Be a Millionaire" that could be played as a class. Students

Solving Systems by Elimination

understanding of how to "eliminate" one of the variables and what the goal of this method is.

Graphing Systems of Inequalities

Be sure to have students solve each inequality for y first

If possible, have students use two different colored pencils to make the solution set clearer. Students can lightly shade each inequality with a different color and then darken the area of overlap which represents the solution set.

A MANEUVERING THE MIDDLE® RESOURCE



an 11 day TEKS-aligned unit

TEKS: A.21, A.3F, A.3G, A.3H, A.5C

unit study guide + assessments

Unit: Systems Quiz 1	NamePd	√ quizzes
QUI7: SOLVING SYSTEMS OF ECS Show all work as you answer each question the box at the right. 1. What must be true about the graph of a infinitely many solutions? a. The lines will have the same slope the solutions.	n below. Record your solutions in 1	✓ editable unit test
 b. The lines will have the same slope a c. The lines will have different slopes d. The lines will have different slopes 	Unit: Systems Review	Jame Date Pd
2. The graph at the right represents whic system of equations? a. $y = 0.5x + 6$ b. $y = -0.5x + y = x + 3$ b. $y = 0.5x + 6$ c. $y = 0.5x + 6$ d. $y = 0.5x - 6$ $y = x + 3$ $y = x + 3$	SYSTEMS STANDARD Solve each problem below. Be sure to ask questions of LINEAR EQUATIONS AND 1. Solve the system by graphing. $y = -\frac{1}{5}x - 1$	
3. Solve the system by graphing. $y=\frac{1}{2}x-$	$y=x-7$ 3. The following system of equations solved by graphing. James thinks the solution while Rebekah thinks there a many solutions. Who do you agree will why? $y=-\frac{3}{4}x+2$ $6x+8y=16$	ALGEBRA 1 CURRICULUM SYSTEMS
	5. Georgia's neighbors pay her \$20 u their pets. Greg's neighbors pay him The system below represents the situ a. Graph the system. b. Estimate the solution. c. Explain the meaning of the solution.	UNIT FIVE: ANSWER KEY
answer l included		©MANEUVERING THE MIDDLE, 2020

A MANEUVERING THE MIDDLE® RESOURCE