

keep scrolling to  
get a sneak peek!

Help your 8<sup>th</sup> Grade/Algebra 1 students practice **solving systems of equations by substitution**. Your students will benefit from being given choice when it comes to how they want to practice math!

# SYSTEMS OF EQUATIONS BY SUBSTITUTION CHOICE BOARD

Date: \_\_\_\_\_ Period: \_\_\_\_\_ Name: \_\_\_\_\_

## Equations Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Solve each system using substitution. Show your work in the boxes.

$\begin{aligned} -12x - 3y &= -57 \\ y &= -4x + 19 \end{aligned}$	$\begin{aligned} y &= -9x + 10 \\ 2x - 11y &= -9 \end{aligned}$	$\begin{aligned} y &= -5x + 7 \\ -12x + 9y &= 6 \end{aligned}$ $\begin{aligned} -12x + 9(-5x + 7) &= 6 \\ -12x - 45x + 63 &= 6 \\ -57x + 63 &= 6 \\ -57x &= -57 \\ x &= 1 \end{aligned}$ $\begin{aligned} y &= -5(1) + 7 \\ y &= -5 + 7 \\ y &= 2 \end{aligned}$ <p><b>(1, 2)</b></p>	$\begin{aligned} -12x - 3y &= -57 \\ y &= -4x + 19 \end{aligned}$ $\begin{aligned} -12x - 3(-4x + 19) &= -57 \\ -12x + 12x - 57 &= -57 \\ -57 &= -57 \checkmark \end{aligned}$ <p><b>Infinitely many solutions</b></p>
$\begin{aligned} x - 2y &= 2 \\ -11x - 11y &= 11 \end{aligned}$	$\begin{aligned} x - 11y &= -11x + 6y \end{aligned}$	$\begin{aligned} -16x - 2y &= -1 \\ 8x + y &= 0 \end{aligned}$ $\begin{aligned} y &= -8x \\ -16x - 2(-8x) &= -1 \\ -16x + 16x &= -1 \\ 0 &\neq -1 \end{aligned}$ <p><b>NO Solution</b></p>	$\begin{aligned} x - 2y &= 2 \\ -11x - 11y &= 11 \end{aligned}$ $\begin{aligned} x &= 2y + 2 \\ -11(2y + 2) - 11y &= 11 \\ -22y - 22 - 11y &= 11 \\ -33y - 22 &= 11 \\ -33y &= 33 \\ y &= -1 \end{aligned}$ $\begin{aligned} x - 2(-1) &= 2 \\ x + 2 &= 2 \\ x &= 0 \end{aligned}$ <p><b>(0, -1)</b></p>
$x - 7y = 17$	$9x + 7y = 2$	$24x + 3y = -5$	$8x + y = 2$

**ANSWER KEY**

Systems of Equations Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Solve each system using substitution. Show your work in the boxes.

Math with Ms. Rivera



# Systems of Equations by Substitution Choice Board *includes:*

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Systems of Equations Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Solve each system using substitution. Show your work in the boxes.

$\begin{aligned}y &= -5x + 7 \\ -12x + 9y &= 6\end{aligned}$	$\begin{aligned}-12x - 3y &= -57 \\ y &= -4x + 19\end{aligned}$	$\begin{aligned}y &= -9x + 10 \\ 2x - 11y &= -9\end{aligned}$
$\begin{aligned}-16x - 2y &= -1 \\ 8x + y &= 0\end{aligned}$	$\begin{aligned}x - 2y &= 2 \\ -11x - 11y &= 11\end{aligned}$	$\begin{aligned}x - 11y &= 11 \\ -11x + 6y &= -6\end{aligned}$
$\begin{aligned}24x + 3y &= -5 \\ 8x + y &= 2\end{aligned}$	$\begin{aligned}x - 7y &= 17 \\ -10x - 10y &= 11\end{aligned}$	

- ✓ printable worksheet
- ✓ a detailed answer key
- ✓ 3 columns with 4 questions in each - 12 question total
- ✓ Spot to assign how many problems students need to complete

# Systems of Equations by Graphing Choice Board

standards covered:

**CCSS:** 8.EE.C.8,  
HSA-REI.C.6

**TEKs:** A1.5.C

**VA SOLs:** EI.A.4.d

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

**ANSWER KEY**

## Systems of Equations Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Solve each system using substitution. Show your work in the boxes.

$\begin{aligned} y &= -5x + 7 \\ -12x + 9y &= 6 \end{aligned}$ $\begin{aligned} -12x + 9(-5x + 7) &= 6 \\ -12x - 45x + 63 &= 6 \\ -57x + 63 &= 6 \\ -63 - 63 & \\ -57x &= -57 \\ \frac{-57x}{-57} &= \frac{-57}{-57} \\ x &= 1 \end{aligned}$ $\begin{aligned} y &= -5(1) + 7 \\ y &= -5 + 7 \\ y &= 2 \end{aligned}$ <p><math>(1, 2)</math></p>	$\begin{aligned} -12x - 3y &= -57 \\ y &= -4x + 19 \end{aligned}$ $\begin{aligned} -12x - 3(-4x + 19) &= -57 \\ -12x + 12x - 57 &= -57 \\ -57 &= -57 \checkmark \end{aligned}$ <p>Ininitely many solutions</p>	$\begin{aligned} y &= -9x + 10 \\ 2x - 11y &= -9 \end{aligned}$ $\begin{aligned} 2x - 11(-9x + 10) &= -9 \\ 2x + 99x - 110 &= -9 \\ 101x - 110 &= -9 \\ +110 & +110 \\ 101x &= 101 \\ \frac{101x}{101} &= \frac{101}{101} \\ x &= 1 \end{aligned}$ $\begin{aligned} y &= -9(1) + 10 \\ y &= -9 + 10 \\ y &= 1 \end{aligned}$ <p><math>(1, 1)</math></p>
$\begin{aligned} -16x - 2y &= -1 \\ 8x + y &= 0 \end{aligned}$ $\begin{aligned} y &= -8x \\ -16x - 2(-8x) &= -1 \\ -16x + 16x &= -1 \\ 0 &\neq -1 \end{aligned}$ <p>NO solution</p>	$\begin{aligned} x - 2y &= 2 \\ -11x - 11y &= 11 \end{aligned}$ $\begin{aligned} x &= 2y + 2 \\ -11(2y + 2) - 11y &= 11 \\ -22y - 22 - 11y &= 11 \\ -33y - 22 &= 11 \\ +22 & +22 \\ -33y &= 33 \\ \frac{-33y}{-33} &= \frac{33}{-33} \\ y &= -1 \end{aligned}$ $\begin{aligned} x - 2(-1) &= 2 \\ x + 2 &= 2 \\ \frac{x + 2}{-2} &= \frac{2}{-2} \\ x &= 0 \end{aligned}$ <p><math>(0, -1)</math></p>	$\begin{aligned} x - 11y &= 11 \\ -11x + 6y &= -6 \end{aligned}$ $\begin{aligned} x &= 11y + 11 \\ -11(11y + 11) + 6y &= -6 \\ -121y - 121 + 6y &= -6 \\ -115y - 121 &= -6 \\ +121 & +121 \\ -115y &= 115 \\ \frac{-115y}{-115} &= \frac{115}{-115} \\ y &= -1 \end{aligned}$ $\begin{aligned} x - 11(-1) &= 11 \\ x + 11 &= 11 \\ \frac{x + 11}{-11} &= \frac{11}{-11} \\ x &= 0 \end{aligned}$ <p><math>(0, -1)</math></p>
$\begin{aligned} 24x + 3y &= -5 \\ 8x + y &= 2 \end{aligned}$	$\begin{aligned} x - 7y &= 2 \end{aligned}$	$\begin{aligned} x - 11y &= 11 \end{aligned}$

# how the choice board resource works

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

*Systems of Equations Choice Board*

Directions: Choose \_\_\_\_\_ problems from each column. Solve each system using substitution.  
Show your work in the boxes.

$\begin{aligned}y &= -5x + 7 \\ -12x + 9y &= 6\end{aligned}$	$\begin{aligned}-12x - 3y &= -57 \\ y &= -4x + 19\end{aligned}$	$\begin{aligned}y &= -9x + 10 \\ 2x - 11y &= -9\end{aligned}$
$\begin{aligned}-16x - 2y &= -1 \\ 8x + y &= 0\end{aligned}$	$\begin{aligned}x - 2y &= 2 \\ -11x - 11y &= 11\end{aligned}$	$\begin{aligned}x - 11y &= 11 \\ -11x + 6y &= -6\end{aligned}$
$\begin{aligned}24x + 3y &= -5 \\ 8x + y &= 2\end{aligned}$	$\begin{aligned}x - 7y &= 17 \\ -10x - 10y &= -10\end{aligned}$	$\begin{aligned}9x + y &= -6 \\ -27x - 3y &= 18\end{aligned}$

Assign students the number of problems they need to complete from each column.

Differentiate the choice board worksheet by reducing the number of problems assigned to show mastery.

Students can complete the any problems they want to in each column and in any order.

# how to use this resource

This is a great individual practice activity to use when reviewing how solve systems of equations using substitution.

My favorite ways to use this choice board is for homework and math practice stations.

This is also a **substitute-friendly** assignment!

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Systems of Equations Choice Board

Directions: Choose \_\_\_\_\_ problems from each column. Solve each system using substitution. Show your work in the boxes.

$\begin{aligned} y &= -5x + 7 \\ -12x + 9y &= 6 \end{aligned}$ $\begin{aligned} -12x + 9(-5x + 7) &= 6 \\ -12x - 45x + 63 &= 6 \\ -57x + 63 &= 6 \\ -57x &= -57 \\ x &= 1 \end{aligned}$ $\begin{aligned} y &= -5(1) + 7 \\ y &= -5 + 7 \\ y &= 2 \end{aligned}$ <p><b>(1, 2)</b></p>	$\begin{aligned} -12x - 3y &= -57 \\ y &= -4x + 19 \end{aligned}$ $\begin{aligned} -12x - 3(-4x + 19) &= -57 \\ -12x + 12x - 57 &= -57 \\ -57 &= -57 \end{aligned}$ <p><b>Infinitely many</b></p>	$\begin{aligned} y &= -9x + 10 \\ 2x - 11y &= -9 \end{aligned}$ $\begin{aligned} 2x - 11(-9x + 10) &= -9 \\ 2x + 99x - 110 &= -9 \\ 101x - 110 &= -9 \\ 101x &= 101 \\ x &= 1 \end{aligned}$ $\begin{aligned} y &= -9(1) + 10 \\ y &= -9 + 10 \\ y &= 1 \end{aligned}$												
$\begin{aligned} -16x - 2y &= -1 \\ 8x + y &= 0 \end{aligned}$ $\begin{aligned} y &= -8x \\ -16x - 2(-8x) &= -1 \\ -16x + 16x &= -1 \\ 0 &= -1 \end{aligned}$ <p><b>NO SOLUTION</b></p>	<p>Name: _____ Date: _____ Period: _____</p> <h2>Systems of Equations Choice Board</h2> <p>Directions: Choose _____ problems from each column. Solve each system using substitution. Show your work in the boxes.</p> <table border="1"> <tbody> <tr> <td> <math display="block">\begin{aligned} y &amp;= -5x + 7 \\ -12x + 9y &amp;= 6 \end{aligned}</math> </td> <td> <math display="block">\begin{aligned} -12x - 3y &amp;= -57 \\ y &amp;= -4x + 19 \end{aligned}</math> </td> <td> <math display="block">\begin{aligned} y &amp;= -9x + 10 \\ 2x - 11y &amp;= -9 \end{aligned}</math> </td> </tr> <tr> <td> <math display="block">\begin{aligned} 24x + 3y &amp;= -5 \\ 8x + y &amp;= 2 \end{aligned}</math> <math display="block">\begin{aligned} y &amp;= -8x + 2 \\ 24x + 3(-8x + 2) &amp;= -5 \\ 24x - 24x + 6 &amp;= -5 \\ 6 &amp;= -5 \end{aligned}</math> <p><b>NO SOLUTION</b></p> </td> <td> <math display="block">\begin{aligned} -16x - 2y &amp;= -1 \\ 8x + y &amp;= 0 \end{aligned}</math> </td> <td> <math display="block">\begin{aligned} x - 2y &amp;= 2 \\ -11x - 11y &amp;= 11 \end{aligned}</math> </td> </tr> <tr> <td> <math display="block">\begin{aligned} -7x - 10y &amp;= 8 \\ -3x - 6y &amp;= 0 \end{aligned}</math> <math display="block">\begin{aligned} y &amp;= \frac{1}{2}x \\ -7x - 10(\frac{1}{2}x) &amp;= 8 \\ -7x - 5x &amp;= 8 \\ -12x &amp;= 8 \\ x &amp;= -\frac{2}{3} \end{aligned}</math> <math display="block">\begin{aligned} -3(-\frac{2}{3}) - 6y &amp;= 0 \\ 2 - 6y &amp;= 0 \\ -6y &amp;= -2 \\ y &amp;= \frac{1}{3} \end{aligned}</math> </td> <td> <math display="block">\begin{aligned} x - 11y &amp;= 11 \\ -11x + 6y &amp;= -6 \end{aligned}</math> </td> <td></td> </tr> <tr> <td> <math display="block">\begin{aligned} 24x + 3y &amp;= -5 \\ 8x + y &amp;= 2 \end{aligned}</math> </td> <td> <math display="block">\begin{aligned} x - 7y &amp;= 17 \\ -10x - 10y &amp;= -10 \end{aligned}</math> </td> <td> <math display="block">\begin{aligned} 9x + y &amp;= -6 \\ -27x - 3y &amp;= 18 \end{aligned}</math> </td> </tr> </tbody> </table>		$\begin{aligned} y &= -5x + 7 \\ -12x + 9y &= 6 \end{aligned}$	$\begin{aligned} -12x - 3y &= -57 \\ y &= -4x + 19 \end{aligned}$	$\begin{aligned} y &= -9x + 10 \\ 2x - 11y &= -9 \end{aligned}$	$\begin{aligned} 24x + 3y &= -5 \\ 8x + y &= 2 \end{aligned}$ $\begin{aligned} y &= -8x + 2 \\ 24x + 3(-8x + 2) &= -5 \\ 24x - 24x + 6 &= -5 \\ 6 &= -5 \end{aligned}$ <p><b>NO SOLUTION</b></p>	$\begin{aligned} -16x - 2y &= -1 \\ 8x + y &= 0 \end{aligned}$	$\begin{aligned} x - 2y &= 2 \\ -11x - 11y &= 11 \end{aligned}$	$\begin{aligned} -7x - 10y &= 8 \\ -3x - 6y &= 0 \end{aligned}$ $\begin{aligned} y &= \frac{1}{2}x \\ -7x - 10(\frac{1}{2}x) &= 8 \\ -7x - 5x &= 8 \\ -12x &= 8 \\ x &= -\frac{2}{3} \end{aligned}$ $\begin{aligned} -3(-\frac{2}{3}) - 6y &= 0 \\ 2 - 6y &= 0 \\ -6y &= -2 \\ y &= \frac{1}{3} \end{aligned}$	$\begin{aligned} x - 11y &= 11 \\ -11x + 6y &= -6 \end{aligned}$		$\begin{aligned} 24x + 3y &= -5 \\ 8x + y &= 2 \end{aligned}$	$\begin{aligned} x - 7y &= 17 \\ -10x - 10y &= -10 \end{aligned}$	$\begin{aligned} 9x + y &= -6 \\ -27x - 3y &= 18 \end{aligned}$
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You may also enjoy ...

## SYSTEMS OF EQUATIONS BY SUBSTITUTION

#	Question	Answer	#	Questions	Answer
1	$y = -2x + 13$ $y = 4x - 11$	<input type="checkbox"/>	6	$y = 2x - 9$ $x - 6y = -11$	<input type="checkbox"/>
2	$y = -3x - 3$ $y = 7x + 17$	<input type="checkbox"/>	7	$4x - 5y = 21$ $x - 3y = 21$	<input type="checkbox"/>
3	$y = 5x - 22$ $7x - 7y = 14$	<input type="checkbox"/>	8	$2x + y = 25$ $3x - 2y = 13$	<input type="checkbox"/>
4	$-9x - 4y = 0$ $y = -5x + 11$	<input type="checkbox"/>	9	$-2x - 7y = 7$ $-8x + y = -1$	<input type="checkbox"/>
5	$-6x + 2y = -4$ $y = -9x + 10$	<input type="checkbox"/>	10	$2x + 10y = -20$ $x + 8y = -10$	<input type="checkbox"/>

Directions: Solve each system of equations using substitution. Type your answer as an ordered pair with no spaces and the picture will

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Math with Ms. Rivera

Self-Checking

## CHOICE BOARDS BUNDLE

### SYSTEMS OF EQUATIONS

Algebra I

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## SYSTEMS OF EQUATIONS

Digital Activity Bundle

Algebra

drag & drop the purple circle over the correct answer.

$3x + y = 6$   
 $3y = 2x + 18$

PARALLEL  
PERPENDICULAR  
NEITHER

$-y + 3x = 16$   
 $y - 3x = 30$

PARALLEL  
PERPENDICULAR  
NEITHER

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# Free Algebra Activities!

When you join my email list, I'll send you a free Algebra print & digital self-checking activities. There is an Algebra 1 and Algebra 2 version!

You'll also be getting exclusive freebies and content to help your Algebra students be successful this school year!

check it out!

The image shows a collage of algebra worksheets and a digital tablet. The worksheets include:

- Answer Key** for **ADDING & SUBTRACTING RATIONAL EXPRESSIONS** and **SOLVING SYSTEMS OF EQUATIONS**.
- MULTIPLYING & DIVIDING RATIONAL EXPRESSIONS** worksheet with problems like  $2. \frac{x}{x+4} \cdot \frac{x^2}{x^2-16}$ .
- SOLVING SYSTEMS OF EQUATIONS** worksheet with problems like  $2. 2x - 6y = -18$  and  $x = 3y - 4$ .

The digital tablet displays a self-checking activity titled **Rational Expression Operations - Addition & Subtraction**. The directions are: "Answer each question and type the question number with the matching answer in the answer column to the right." The activity consists of a table with 8 questions and 8 answers, with a path of colored lines connecting the questions to their corresponding answers.

#	Question	Answer	Type the matching question numbers here
1	$\frac{5}{x} + \frac{3}{x+1}$	$\frac{2x+1}{x+2}$	
2	$\frac{2}{x+4} - \frac{x^2}{x^2-16}$	$-\frac{1}{x^2-1}$	
3	$\frac{x+2}{x^2+4x+4} + \frac{2x}{x+2}$	$\frac{2x^2+2x+5}{x^2+x-2}$	
4	$\frac{x}{x-2} + \frac{3}{x-1}$	$-\frac{x^2+2x-8}{x^2-16}$	
5	$\frac{x}{4x+8} - \frac{1}{x^2+2x}$	$\frac{8x+5}{x^2+1}$	
6	$\frac{x+2}{x-1} + \frac{x-1}{x+2}$	$\frac{x^2-3x+7}{x^2-4}$	
7	$\frac{2x+1}{x^2-4} + \frac{x-3}{x+2}$	$\frac{x^2+2x-6}{x^2-3x+2}$	
8	$\frac{x^2+2x}{x^2-1} - \frac{x+1}{x-1}$	$\frac{x-2}{4x}$	

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hey there!

My name is Malia and I'm passionate about making learning and practicing math fun. I love creating engaging math resources for my students and I hope your students enjoy this activity too!

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