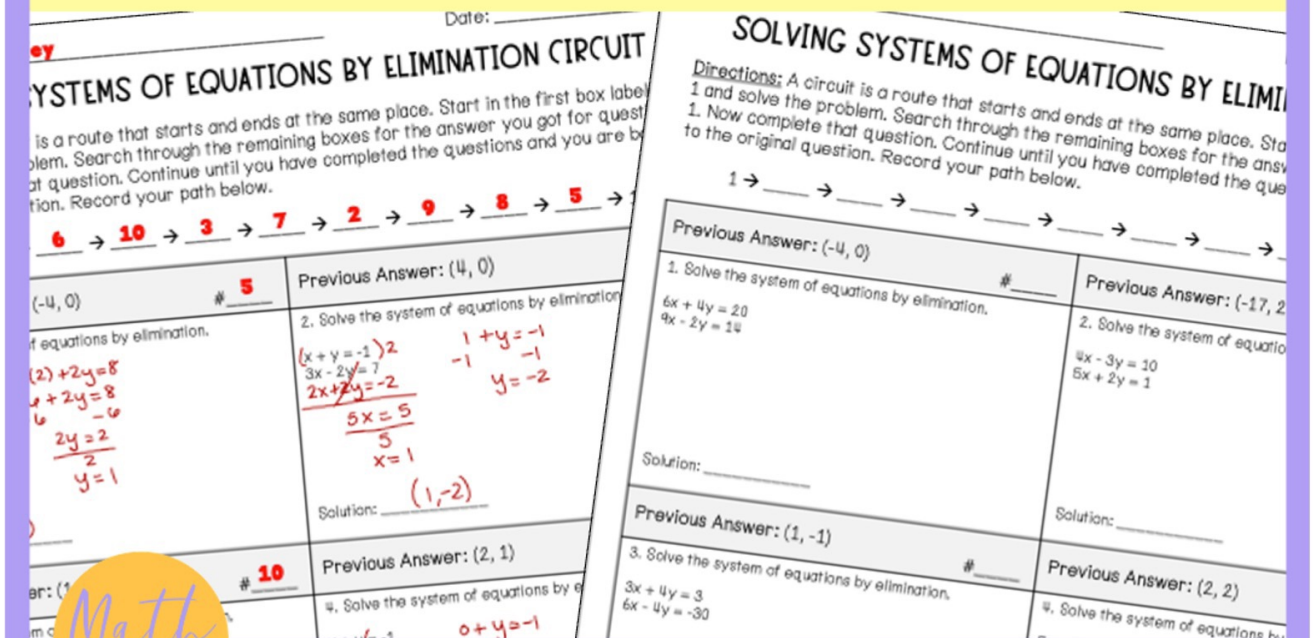
keep scrolling to get a sneak peek!

Help your Algebra 1 students practice **solving systems of equations by elimination** given points. Students will be eager to get the self-checking benefits from this circuit activity!

SYSTEMS OF EQUATIONS BY ELIMINATION

Differentiated Circuit Worksheet



2 versions + answer key included

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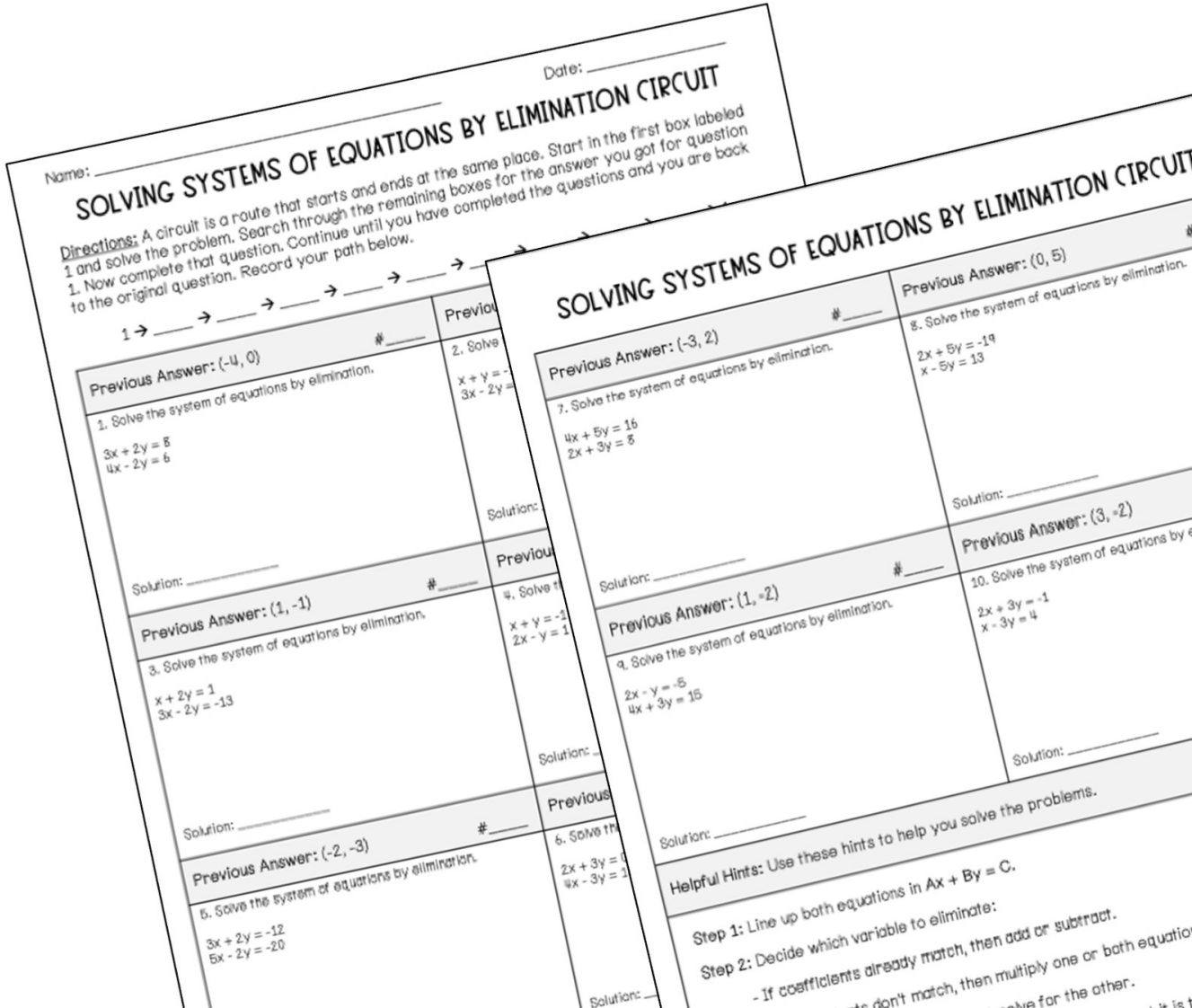
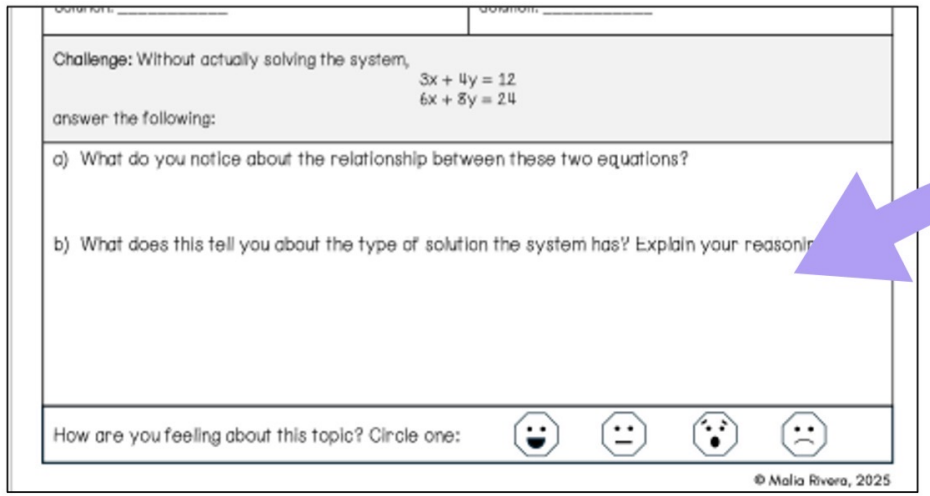
Solving Systems of Equations by Elimination Circuit

Why do you need this?

- It's self-checking! Your students will know if they are correct or not.
- 2 differentiated versions for all students practice this essential math skill.



Systems of Equations by Elimination Circuit *includes*:



Challenge: Without actually solving the system,

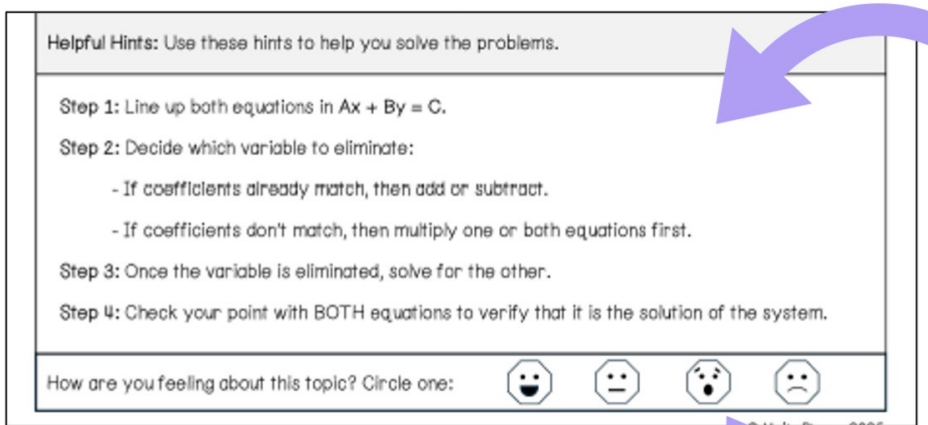
$3x + 4y = 12$
$6x + 8y = 24$

answer the following:

a) What do you notice about the relationship between these two equations?

b) What does this tell you about the type of solution the system has? Explain your reasoni

How are you feeling about this topic? Circle one:



Helpful Hints: Use these hints to help you solve the problems.

Step 1: Line up both equations in Ax + By = C.

Step 2: Decide which variable to eliminate:

- If coefficients already match, then add or subtract.
- If coefficients don't match, then multiply one or both equations first.

Step 3: Once the variable is eliminated, solve for the other.

Step 4: Check your point with BOTH equations to verify that it is the solution of the system.

How are you feeling about this topic? Circle one:

- ✅ 10 self-checking problems
- ✅ a detailed answer key
- ✅ a standard version with an extension question
- ✅ a basic version with helpful hints section
- ✅ student self assessment

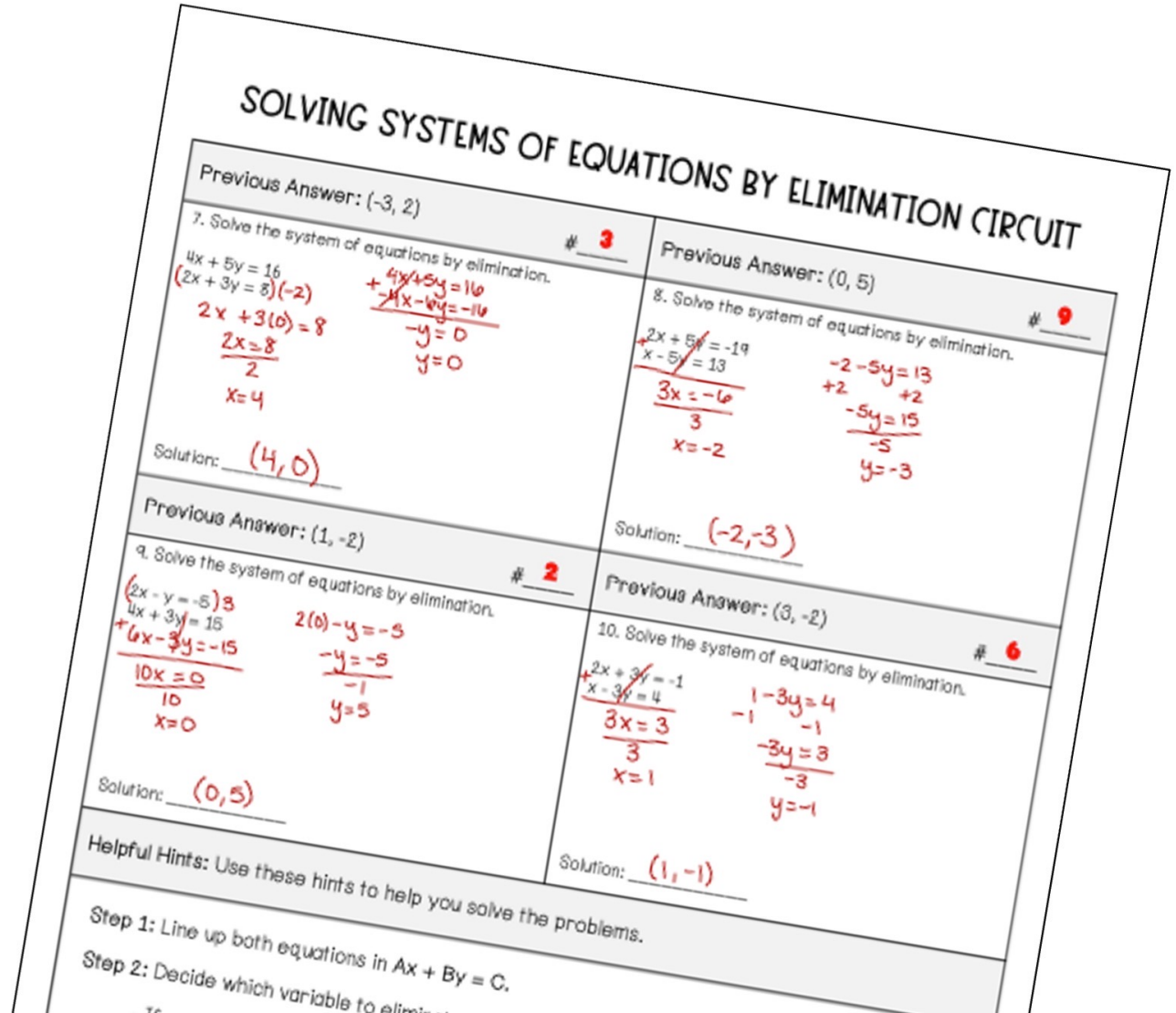
Systems of Equations by Elimination Circuit

standards covered:

CCSS: 8.EE.C.8.ab

TEKs: A1.5.C

VA SOLs: EI.A.4.d


SOLVING SYSTEMS OF EQUATIONS BY ELIMINATION CIRCUIT

Previous Answer: (-3, 2) # 3

7. Solve the system of equations by elimination.

$4x + 5y = 16$
$(2x + 3y = 8)(-2)$
$2x + 3(0) = 8$
$2x = 8$
$x = 4$
$+4x+5y=16$
$-4x-6y=-16$
$-y = 0$
$y = 0$

Solution: (4, 0)

Previous Answer: (0, 5) # 9

8. Solve the system of equations by elimination.

$2x + 5y = -19$
$x - 5y = 13$
$3x = -6$
$x = -2$
$-2 - 5y = 13$
$+2 \quad +2$
$-5y = 15$
$y = -3$

Solution: (-2, -3)

Previous Answer: (1, -2) # 2

9. Solve the system of equations by elimination.

$(2x - y = -5)3$
$4x + 3y = 15$
$6x - 3y = -15$
$10x = 0$
$x = 0$
$2(0) - y = -5$
$-y = -5$
$y = 5$

Solution: (0, 5)

Previous Answer: (3, -2) # 6

10. Solve the system of equations by elimination.

$2x + 3y = -1$
$x - 3y = 4$
$3x = 3$
$x = 1$
$1 - 3y = 4$
$-1 \quad -1$
$-3y = 3$
$y = -1$

Solution: (1, -1)

Helpful Hints: Use these hints to help you solve the problems.

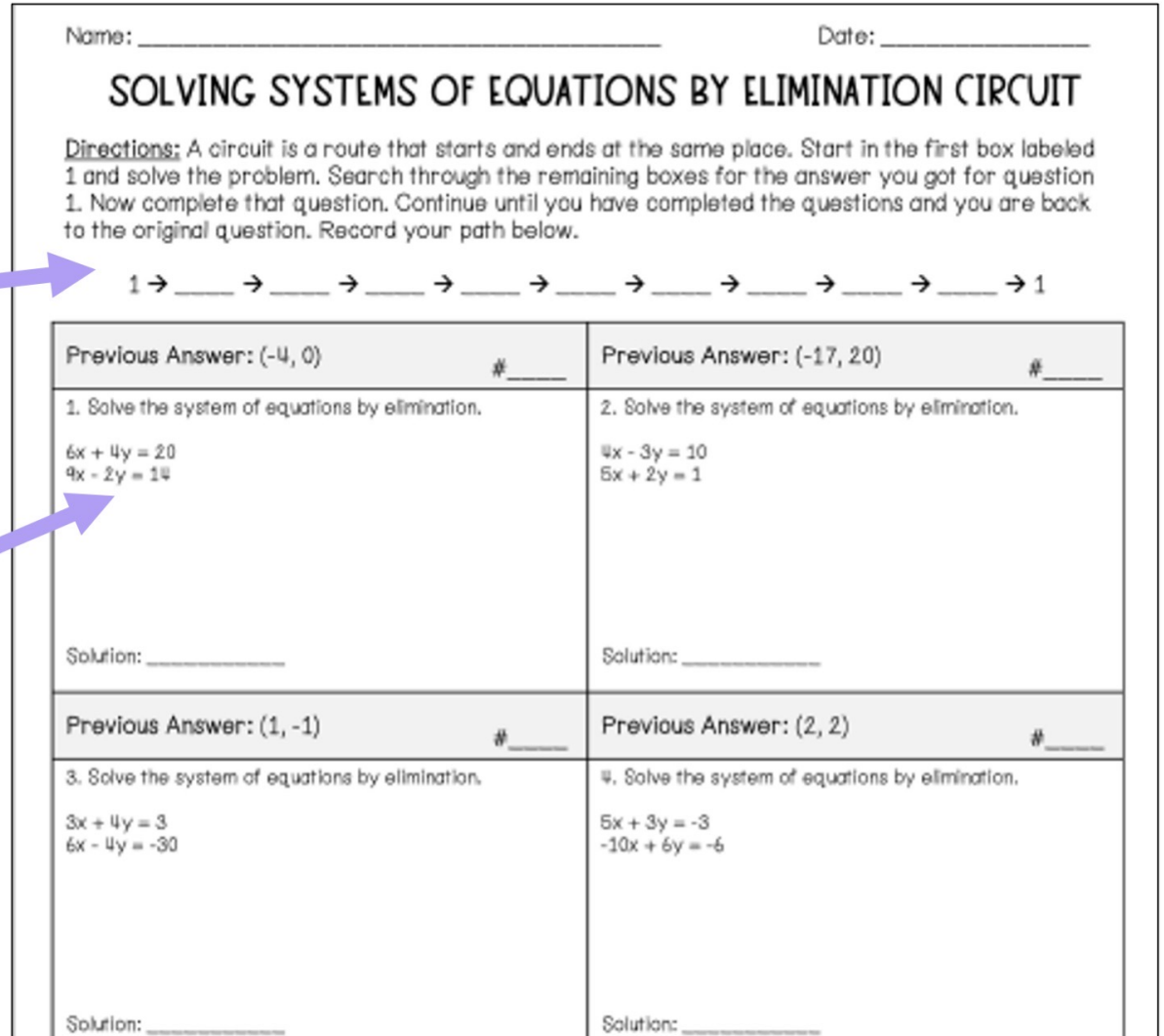
Step 1: Line up both equations in $Ax + By = C$.

Step 2: Decide which variable to elimi

how this circuit resource works

Students can track their path at the top.

Students start with the first question.



Name: _____ Date: _____

SOLVING SYSTEMS OF EQUATIONS BY ELIMINATION CIRCUIT

Directions: A circuit is a route that starts and ends at the same place. Start in the first box labeled 1 and solve the problem. Search through the remaining boxes for the answer you got for question 1. Now complete that question. Continue until you have completed the questions and you are back to the original question. Record your path below.

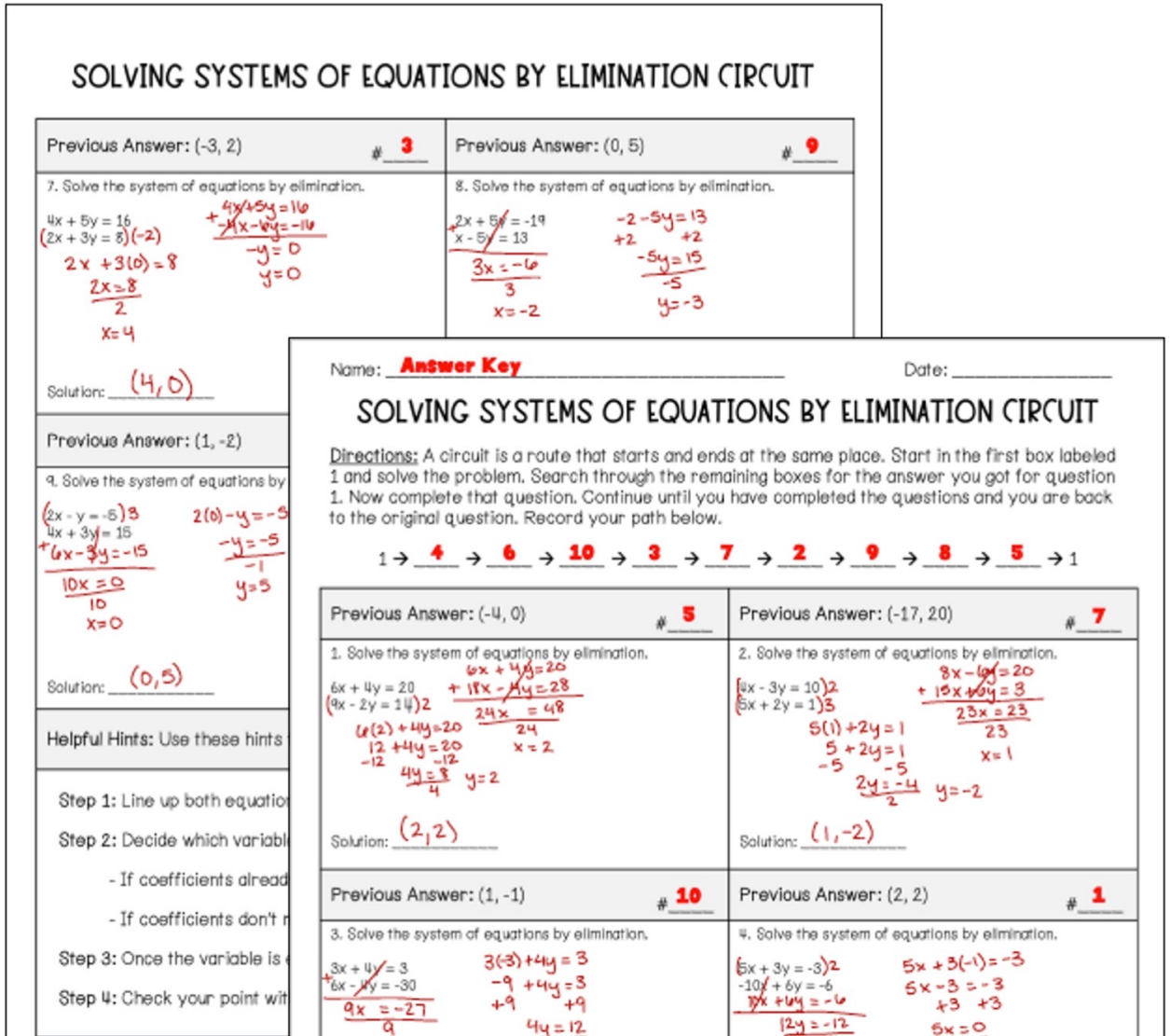
1 → ____ → ____ → ____ → ____ → ____ → ____ → ____ → ____ → ____ → 1

Previous Answer: (-4, 0) #____	**Previous Answer:** (-17, 20) #____
1. Solve the system of equations by elimination. $6x + 4y = 20$ $9x - 2y = 18$ Solution: _____	2. Solve the system of equations by elimination. $4x - 3y = 10$ $5x + 2y = 1$ Solution: _____
Previous Answer: (1, -1) #____	**Previous Answer:** (2, 2) #____
3. Solve the system of equations by elimination. $3x + 4y = 3$ $6x - 4y = -30$ Solution: _____	4. Solve the system of equations by elimination. $5x + 3y = -3$ $-10x + 6y = -6$ Solution: _____

Then search for their answer on the worksheet. Once the answer is found, students complete the problem below it.

The last question they answer should lead back to problem #1 to "close" the circuit.

how to use this resource



SOLVING SYSTEMS OF EQUATIONS BY ELIMINATION CIRCUIT

Previous Answer: (-3, 2) # 3

7. Solve the system of equations by elimination.

$4x + 5y = 16$
$(2x + 3y = 8)(-2)$
$2x + 3(0) = 8$
$\frac{2x = 8}{2}$
$x = 4$

$+\ 4x + 5y = 16$
$-4x - 6y = -16$
$-y = 0$
$y = 0$

Solution: (4, 0)

Previous Answer: (0, 5) # 9

8. Solve the system of equations by elimination.

$2x + 5y = -19$
$+\ x - 5y = 13$
$\frac{3x = -6}{3}$
$x = -2$

$-2 - 5y = 13$
$+2 \quad +2$
$\frac{-5y = 15}{-5}$
$y = -3$

Previous Answer: (1, -2)

9. Solve the system of equations by

$(2x - y = -5)3$
$4x + 3y = 15$
$+\ 6x - 3y = -15$
$\frac{10x = 0}{10}$
$x = 0$

$2(0) - y = -5$
$-y = -5$
$-1 \quad -1$
$y = 5$

Solution: (0, 5)

Helpful Hints: Use these hints

Step 1: Line up both equatio

Step 2: Decide which variabl

- If coefficients alread
- If coefficients don't r

Step 3: Once the variable is

Step 4: Check your point wit

Name: **Answer Key** Date: _____

SOLVING SYSTEMS OF EQUATIONS BY ELIMINATION CIRCUIT

Directions: A circuit is a route that starts and ends at the same place. Start in the first box labeled 1 and solve the problem. Search through the remaining boxes for the answer you got for question 1. Now complete that question. Continue until you have completed the questions and you are back to the original question. Record your path below.

1 → 4 → 6 → 10 → 3 → 7 → 2 → 9 → 8 → 5 → 1

Previous Answer: (-4, 0) # 5

1. Solve the system of equations by elimination.

$6x + 4y = 20$
$(9x - 2y = 14)2$
$6(2) + 4y = 20$
$12 + 4y = 20$
$-12 \quad -12$
$\frac{4y = 8}{4}$ $y = 2$

$6x + 4y = 20$
$+\ 18x - 4y = 28$
$\frac{24x = 48}{24}$
$x = 2$

Solution: (2, 2)

Previous Answer: (-17, 20) # 7

2. Solve the system of equations by elimination.

$(8x - 3y = 10)2$
$(5x + 2y = 1)3$
$5(1) + 2y = 1$
$5 + 2y = 1$
$-5 \quad -5$
$\frac{2y = -4}{2}$ $y = -2$

$8x - 6y = 20$
$+\ 15x + 6y = 3$
$\frac{23x = 23}{23}$
$x = 1$

Solution: (1, -2)

Previous Answer: (1, -1) # 10

3. Solve the system of equations by elimination.

$3x + 4y = 3$
$+\ 6x - 4y = -30$
$\frac{9x = -27}{9}$

$3(-3) + 4y = 3$
$-9 + 4y = 3$
$+9 \quad +9$
$4y = 12$

Previous Answer: (2, 2) # 1

4. Solve the system of equations by elimination.

$(5x + 3y = -3)2$
$-10x + 6y = -6$
$+\ 10x + 6y = -6$
$\frac{12y = -12}{12}$

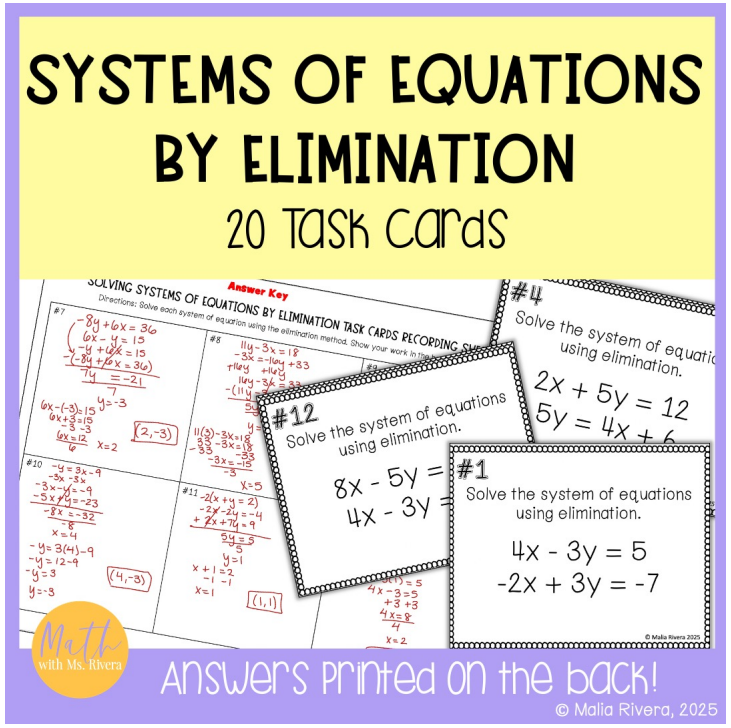
$5x + 3(-1) = -3$
$5x - 3 = -3$
$+3 \quad +3$
$5x = 0$

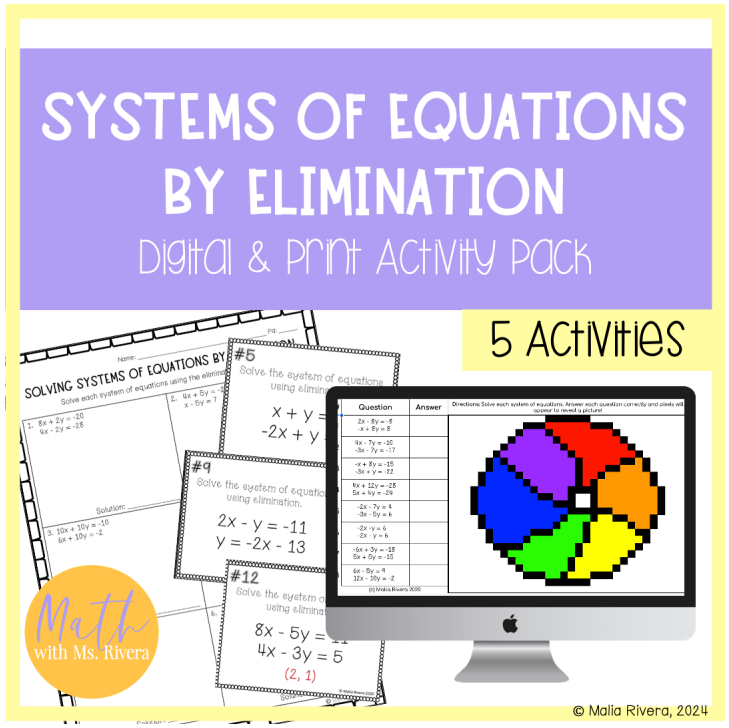
This is a great activity to use when reviewing how to solve systems of equations using the elimination method.

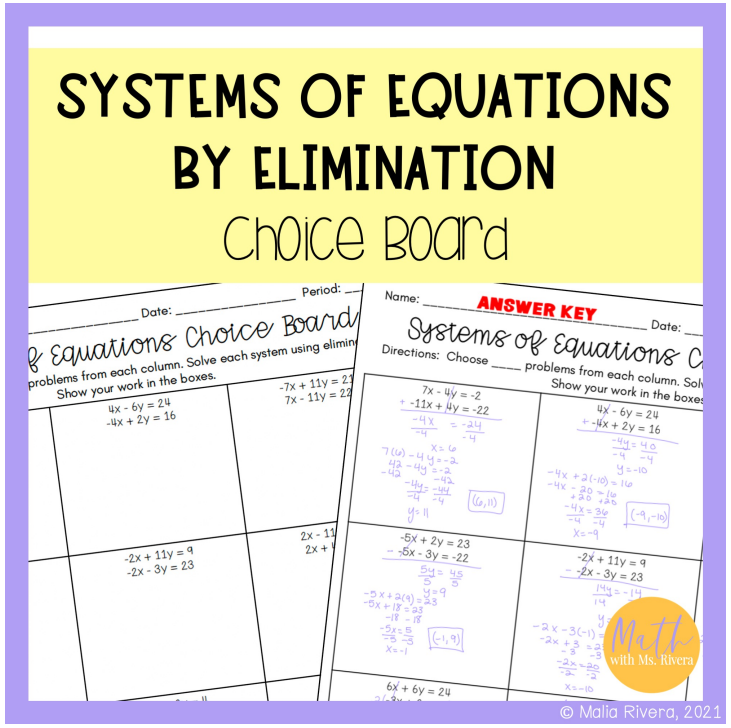
It can be used right after teaching the concept or as homework.

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

You may also *enjoy*...







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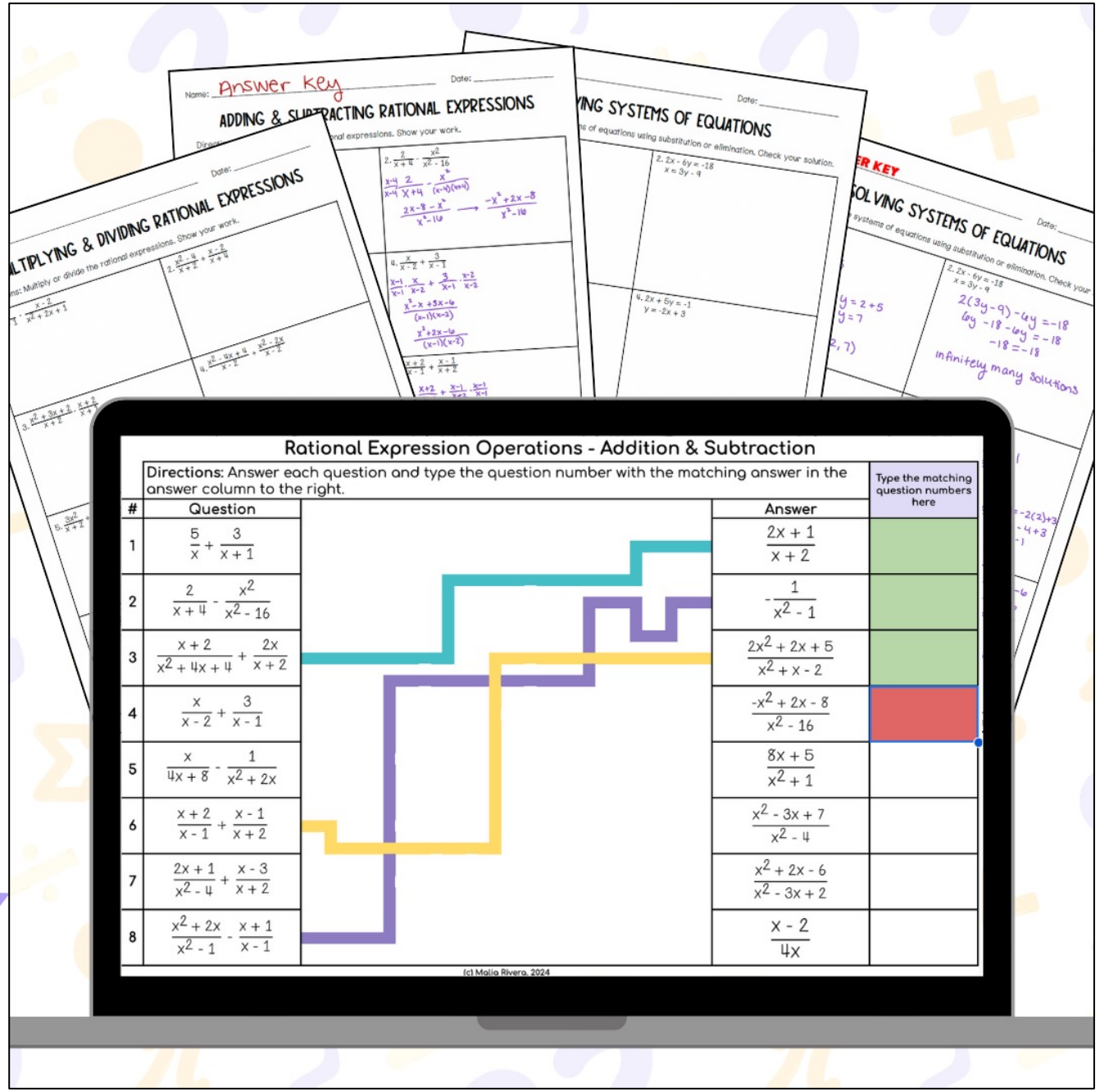

hey there!

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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