

keep scrolling to  
get a sneak peek!

Help your Algebra 2 students practice **identifying domain and range of functions from graphs**. Students will be eager to get the self-checking benefits from this circuit activity!

# IDENTIFYING DOMAIN & RANGE FROM GRAPHS

Differentiated circuit worksheet

The image shows two overlapping circuit worksheet pages. The top page is titled "IDENTIFYING DOMAIN & RANGE FROM GRAPHS" and includes a "Date:" field. Below the title, there are instructions: "A circuit is a route that starts and ends at the same place. Start in the first box labeled '1'. Search through the remaining boxes for the answer you got for question 1. Continue until you have completed the questions and you are back at question 1. Record your path below." Below the instructions is a sequence of arrows:  $1 \rightarrow 4 \rightarrow 9 \rightarrow 6 \rightarrow 2 \rightarrow 10 \rightarrow 5 \rightarrow 3 \rightarrow 1$ . The page contains several boxes, each with a question number and a graph. For example, question 1 asks to identify the domain of a graph, and the previous answer is  $x < -1, x \geq -1$ . Question 2 asks to identify the range of a graph, and the previous answer is  $x > -1$ . The bottom page is titled "IDENTIFYING DOMAIN & RANGE FROM GRAPHS" and includes an "Answer Key - Inequality" section. It has the same instructions and sequence of arrows. The questions and previous answers are similar to the top page, but with different graphs and answers. For example, question 1 asks to identify the domain of a graph, and the previous answer is  $y < 4$ . Question 2 asks to identify the range of a graph, and the previous answer is  $x > -2$ . Question 3 asks to identify the domain of a graph, and the previous answer is  $-4 \leq y \leq 5$ . Question 4 asks to identify the domain of a graph, and the previous answer is  $-3 \leq x \leq 2$ .



2 versions + answer key included

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Why do you need this?

# Identifying Domain & Range from Graphs Circuit



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.

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

## IDENTIFYING DOMAIN & RANGE FROM GRAPHS

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 → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_

Previous Answer: $x < -1, x \geq -1$ # _____	2. Identify the domain of the graph.	Previous Answer: $y < -5$ # _____	7. Identify the range of the graph.
Previous Answer: $-5 \leq x < 2$ # _____	3. Identify the domain of the graph.	Previous Answer: $-1 \leq x < 3$ # _____	9. Identify the range of the graph.
Previous Answer: $x < 4$ # _____	5. Identify the domain of the graph.	Previous Answer: $-4 \leq x \leq 2, x > 4$ # _____	8. Identify the range of the graph.

10. Identify the range of the graph.

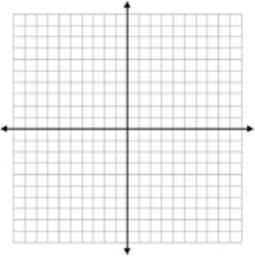
Helpful Hints: Use these hints to help you solve the problems.  
Domain: all possible x-values (left to right)  
Range: all possible y-values (bottom to top)

mean the values is included  $\rightarrow \leq$  or  $\geq$   
is not included  $\rightarrow <$  or  $>$

# Domain & Range of Graphs Circuit *includes:*

Challenge: Create a continuous graph that satisfies the following conditions.

Domain:  $-4 \leq x < 2$   
Range:  $-1 \leq y \leq 5$

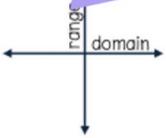


How are you feeling about this topic? Circle one:

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

Domain: all possible x-values (left to right)  
Range: all possible y-values (bottom to top)



Closed dots mean the values is *included*  $\rightarrow \leq$  or  $\geq$   
Open dots mean the values is *not included*  $\rightarrow <$  or  $>$

Remember to write the domain and range from *least* to *greatest*!

How are you feeling about this topic? Circle one:

- ✓ 10 self-checking problems, for interval & inequality notations
- ✓ a detailed answer key
- ✓ a standard version with an extension question
- ✓ a basic version with helpful hints section
- ✓ student self assessment

# Domain & Range of Graphs Circuit

standards covered:

**CCSS:** HSA-IF.A.1

**TEKs:** AR.7.A

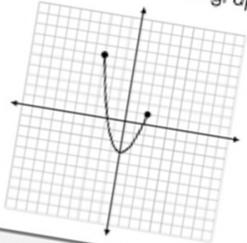
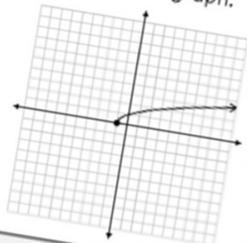
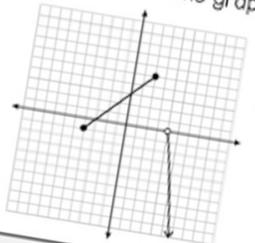
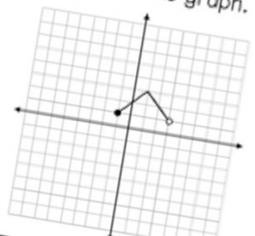
**VA SOLs:** All.7.a

Name: **Answer Key - Interval** Date: \_\_\_\_\_

## IDENTIFYING DOMAIN & RANGE FROM GRAPHS

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

Previous Answer: $(-\infty, 4)$	# <b>7</b>	Previous Answer: $(-2, \infty)$	# <b>6</b>
1. Identify the domain of the graph. 		2. Identify the range of the graph. 	
Previous Answer: $[-4, 5]$	# <b>5</b>	Previous Answer: $[-3, 2]$	# <b>1</b>
3. Identify the domain of the graph. 		4. Identify the domain of the graph. 	
Previous Answer: $(-3, \infty)$	# <b>10</b>		
5. Identify the per...			

# how this circuit resource works

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

Students can track their path at the top.



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

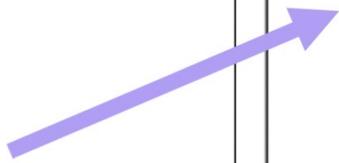
## IDENTIFYING DOMAIN & RANGE FROM GRAPHS

**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: $y < 4$ # _____	Previous Answer: $x > -2$ # _____
1. Identify the domain of the graph. 	2. Identify the range of the graph. 
Previous Answer: $-4 \leq y \leq 5$ # _____	Previous Answer: $-3 \leq x \leq 2$ # _____
3. Identify the domain of the graph. 	4. Identify the domain of the graph. 

Students start with the first question.



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

# how to use this resource

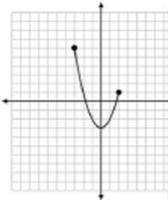
Name: **Answer Key - Interval** Date: \_\_\_\_\_

## IDENTIFYING DOMAIN & RANGE FROM GRAPHS

**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.

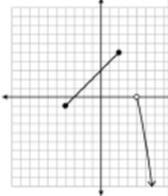
1 → **4** → **9** → **6** → **2** → **10** → **5** → **3** → **8** → **7** → 1

Previous Answer: $(-\infty, 4)$ # <b>7</b>	Previous Answer: $(-2, \infty)$ # <b>6</b>
1. Identify the domain of the graph.	2. Identify the range of the graph.



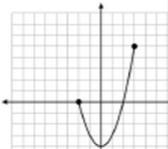
Previous Answer:  $[-4, 5]$

3. Identify the domain of the graph.



Previous Answer:  $(-3, \infty)$

5. Identify the range of the graph.



## Answer Key - Inequality

## IDENTIFYING DOMAIN & RANGE FROM GRAPHS

Previous Answer: $y < -5$ # <b>8</b>	Previous Answer: $-4 \leq x \leq 2, x > 4$ # <b>3</b>
7. Identify the range of the graph.	8. Identify the range of the graph.
Previous Answer: $-1 \leq x < 3$ # <b>4</b>	Previous Answer: $y \geq 0$ # <b>2</b>
9. Identify the range of the graph.	10. Identify the range of the graph.

This is a great activity to use when reviewing how to identify the domain and range given graphs in interval OR inequality notation.

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

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



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**Answer Key**  
Name: \_\_\_\_\_ Date: \_\_\_\_\_  
**ADDING & SUBTRACTING RATIONAL EXPRESSIONS**  
Directions: Add or subtract the rational expressions. Show your work.

**SOLVING SYSTEMS OF EQUATIONS**  
Date: \_\_\_\_\_  
Solve systems of equations using substitution or elimination. Check your solution.

**ANSWER KEY**  
Date: \_\_\_\_\_  
**SOLVING SYSTEMS OF EQUATIONS**  
Solve systems of equations using substitution or elimination. Check your solution.

**Rational Expression Operations - Addition & Subtraction**  
Directions: Answer each question and type the question number with the matching answer in the answer column to the right.

#	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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