

keep scrolling to
get a sneak peek!

Help your Algebra students practice evaluating functions from scatter plots, linear functions, and exponential functions. Students will be eager to get the self-checking benefits from this circuit activity!

EVALUATING FUNCTIONS FROM GRAPHS

Differentiated Circuit worksheet

EVALUATING FUNCTIONS FROM GRAPHS CIRCUIT
A circuit is a route that starts and ends at the same place. Start in the first problem. Search through the remaining boxes for the answer you got. Complete that question. Continue until you have completed the questions and return to the first question. Record your path below.

→ → → → → → → → → →

Previous Answer: $x = 4, f(-2) = 4$ # Previous Answer: $x = 1, f(-1) = 0$

1. Evaluate the function.
the function.
 $f(x) = 0, x = \underline{\quad}$
 $f(2) = \underline{\quad}$

Previous Answer: $x = -1, f(0) = 1$ # 1 Previous Answer: $f(x) = 4, x = -2$

7. Evaluate the function.
 $f(x) = -6, x = \underline{0}$
 $f(5) = \underline{0}$

8. Evaluate the function.
 $f(1) = \underline{-5}$

Previous Answer: $x = -3, f(3) = -5$ # 4 Previous Answer: $x = \underline{\quad}$

9. Evaluate the function.
 $f(x) = -1, x = \underline{0}$
 $f(-2) = \underline{2}$

10. Evaluate the function.
 $f(x) = -1, x = \underline{4}$
 $f(-2) = \underline{4}$



2 versions + answer key included

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Why do you need this?

Evaluating Functions 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: _____

EVALUATING FUNCTIONS FROM GRAPHS CIRCUIT

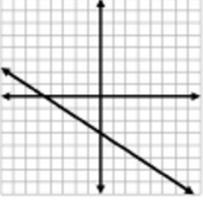
Directions: A circuit is a route that starts and ends at the same place. Start in the first box labeled 1 and solve the problem. Search through the remaining boxes for the answer you got for question 1. Now complete that question. Continue until you have completed the questions and you are back to the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

1 → _____ → _____ → _____ → _____ → _____

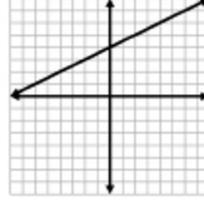
Previous Answer: $x = 4, f(-2) = 4$ # _____	2. Evaluate the function. $f(x) = 0$ $f(2) =$
1. Evaluate the function. $f(x) = -2, x =$ $f(0) =$	
Previous Answer: $x = 0, f(5) = 0$ # _____	4. Evaluate the function. $f(x) = -3$ $f(3) =$
3. Evaluate the function. $f(x) = 2, x =$ $f(-1) =$	
Previous Answer: $x = 1, f(2) = 6$ # _____	6. Evaluate the function. $f(x) = 5$ $f(4) =$
5. Evaluate the function. $f(x) = -2, x =$	
Previous Answer: $x = -1, f(0) = 1$ # _____	7. Evaluate the function. $f(x) = -6, x =$ $f(5) =$
8. Evaluate the function. $f(x) = 4, x =$ $f(1) =$	
Previous Answer: $x = -3, f(3) = -5$ # _____	9. Evaluate the function. $f(x) = -1, x =$ $f(-2) =$
10. Evaluate the function. $f(x) = -1, x =$ $f(-2) =$	
Challenge: Evaluate each function using the corresponding graphs. $f(3) =$ $g(-2) =$ $f(3) =$ g	

Evaluating Functions from Graphs *includes:*

Challenge: Evaluate each function using the corresponding graphs.



Graph $f(x)$



Graph $g(x)$

$f(3) = \underline{\hspace{2cm}}$ $f(-3) = \underline{\hspace{2cm}}$
 $g(-2) = \underline{\hspace{2cm}}$ $g(2) = \underline{\hspace{2cm}}$
 $f(3) + g(2) = \underline{\hspace{2cm}}$
 $g(-2) \cdot g(2) = \underline{\hspace{2cm}}$
 $f(-3) - g(-2) = \underline{\hspace{2cm}}$

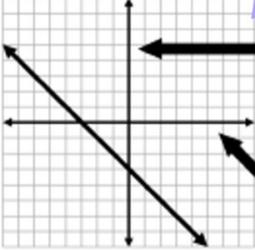
How are you feeling about this topic? Circle one:

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

$f(x) = 2, x = \underline{\hspace{2cm}}$
"What is x when y is 2?"

$f(-3) = \underline{\hspace{2cm}}$
"What is y when x is -3?"



$f(x) = y$

x

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

Evaluating Functions from Graphs

standards covered:

CCSS: HSF-IF.A.2

TEKs: A1.12.B

VA SOLs: F.A.7.e

EVALUATING FUNCTIONS FROM GRAPHS CIRCUIT

Previous Answer: $x = -1, f(0) = 1$ # 1

7. Evaluate the function.

$f(x) = -6, x = \underline{0}$

$f(5) = \underline{0}$

Previous Answer: $x = 0, f(-2) = 2$ # 9

8. Evaluate the function.

$f(x) = 4, x = \underline{-2}$

$f(1) = \underline{-5}$

Previous Answer: $x = -3, f(3) = -5$ # 4

9. Evaluate the function.

$f(x) = -1, x = \underline{0}$

$f(-2) = \underline{2}$

Previous Answer: $x = -2, f(1) = -5$ # 8

10. Evaluate the function.

$f(x) = -1, x = \underline{4}$

$f(-2) = \underline{4}$

Challenge: Evaluate each function using the corresponding graphs.

$f(3) = \underline{-5}$

how this circuit resource works

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

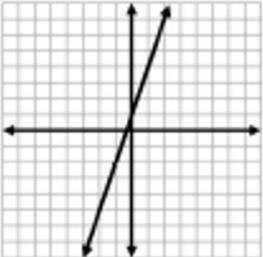
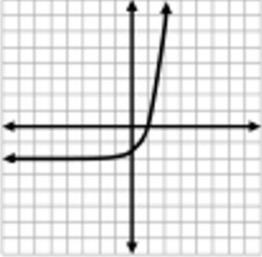
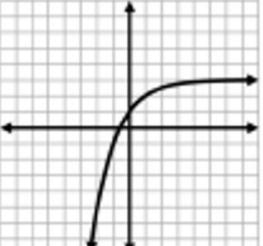
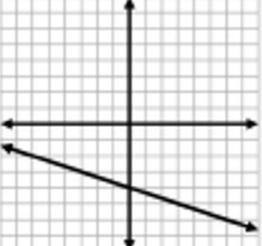
Students can track their path at the top.

Name: _____ Date: _____

EVALUATING FUNCTIONS FROM GRAPHS 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: $x = 4, f(-2) = 4$ # _____	Previous Answer: $x = 1, f(-1) = -1$ # _____
1. Evaluate the function. $f(x) = -2, x = \underline{\hspace{2cm}}$ $f(0) = \underline{\hspace{2cm}}$ 	2. Evaluate the function. $f(x) = 0, x = \underline{\hspace{2cm}}$ $f(2) = \underline{\hspace{2cm}}$ 
Previous Answer: $x = 0, f(5) = 0$ # _____	Previous Answer: $x = 0, f(4) = 2$ # _____
3. Evaluate the function. $f(x) = 2, x = \underline{\hspace{2cm}}$ $f(-1) = \underline{\hspace{2cm}}$ 	4. Evaluate the function. $f(x) = -3, x = \underline{\hspace{2cm}}$ $f(3) = \underline{\hspace{2cm}}$ 

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** Date: _____

EVALUATING FUNCTIONS FROM GRAPHS 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 → **7** → **3** → **2** → **5** → **6** → **4** → **9** → **8** → **10** → 1

Previous Answer: $x = 4, f(-2) = 4$ # 10	Previous Answer: $x = 1, f(-1) = -1$ # 3
---	---

1. Evaluate the function.

$f(x) = -2, x = -1$

$f(0) = 1$

Previous Answer: $x = 0, f(5) = 5$

3. Evaluate the function.

$f(x) = 2, x = 1$

$f(-1) = -1$

Previous Answer: $x = 1, f(2) = 2$

5. Evaluate the function.

$f(x) = -2, x = -6$

$f(-1) = 0$

EVALUATING FUNCTIONS FROM GRAPHS CIRCUIT

Previous Answer: $x = 6, f(-2) = -6$ # 1	Previous Answer: $x = 2, f(-1) = 5$ # 9
---	--

7. Evaluate the function.

$f(x) = 0, x = 1$

$f(-2) = 3$

8. Evaluate the function.

$f(x) = -2, x = 0$

$f(3) = -1$

Previous Answer: $x = -2, f(2) = -4$ # **4**

Previous Answer: $x = 0, f(3) = -1$ # **8**

9. Evaluate the function.

$f(x) = -4, x = 2$

$f(-1) = 5$

10. Evaluate the function.

$f(x) = -6, x = 5$

$f(0) = -5$

This is a great activity to use when reviewing how evaluate functions when given a scatter plot, linear function, or exponential function.

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

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

Free Algebra Activities!

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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 $\frac{x-2}{x^2+2x+1}$.
- 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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