keep scrolling to get a sneak peek!

Help your Algebra 2 students practice **adding, subtracting, multiplying and dividing functions** . Students will be eager to get the self-checking benefits from this circuit activity!

FUNCTION OPERATIONS

Differentiated Circuit Worksheet

ey

UNCTION OPERATIONS CIRCUIT

is a route that starts and ends at the same place. Start in the first box labe
olem. Search through the remaining boxes for the answer you got for ques
at question. Continue until you have completed the questions and you are b
tion. Record your path below.

$6 \rightarrow 9 \rightarrow 3 \rightarrow 7 \rightarrow 10 \rightarrow 2 \rightarrow 5 \rightarrow 8$

x² -1   # 8

5 and g(x) = x² - 3.

+ (x²–3)

+ 2x +2

Previous Answer: -10x³ + 2x² - 3x + 6

2. Let f(x) = 4x and g(x) = x - 1.
Find (g - f)(x).

(x–1) – (4x)

–3x – 1

er: X   # 9

4. Let f(x) = 3x - 4 and g(x) = x
Find (f - g)(x).

Previous Answer: x² + 2x + 2

Directions: A circuit is a route that starts and ends at the same place. Sta
1 and solve the problem. Search through the remaining boxes for the answ
1. Now complete that question. Continue until you have completed the que
to the original question. Record your path below.

$1 \rightarrow$ ___ $\rightarrow$ ___ $\rightarrow$ ___
___ $\rightarrow$ ___ $\rightarrow$ ___

Previous Answer: 3x + 5

1. Let f(x) = x² + 3x - 1 and g(x) = 2x - 5.
Find (f + g)(x).   #____

Previous Answer: x⁴ + 2

2. Let f(x) = x + 2 and g(
Find (g · f)(x).

Previous Answer: -x² + 5x + 1

3. Let f(x) = x² - 1 and g(x) = x - 1.
Find (f/g)(x).   #____

Previous Answer: x² + 5x -

4. Let f(x) = 2x² - x +

Math with Ms. Rivera

2 versions + answer key included

Function Operations Circuit Worksheet

🖊️ 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.

FUNCTION OPERATIONS CIRCUIT

Name: _____   Date: _____

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: $x^2 - 1$
1. Let $f(x) = 2x + 5$ and $g(x) = x^2 - 3$.
Find $(f + g)(x)$.

2. Let f
Find $(g$

Previous Answer: $\frac{x + 2}{3x}$
3. Let $f(x) = x^2 + 2x$ and $g(x) = 5x$.
Find $(f \cdot g)(x)$.

4. Let $f($
Find $(f -$

Previous Answer: $-3x - 1$
5. Let $f(x) = 2x^2 - 2$ and $g(x) = x^2 - 1$.
Find $(\frac{f}{g})(x)$.

6. Let $f($
Find $(g +$

FUNCTION OPERATIONS CIRCUIT

Name: _____   Date: _____

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

1 → ___ → ___ → ___ → ___ → ___

Previous Answer: $x^4 + 2x^3 + x^2$
2. Let $f(x) = x + 2$ and $g(x) = 3x + 4$.
Find $(g \cdot f)(x)$.

Previous Answer: $3x + 5$
1. Let $f(x) = x^2 + 3x - 1$ and $g(x) = 2x - 5$.
Find $(f + g)(x)$.

Previous Answer: $x^2 + 5x - 4$
4. Let $f(x) = 2x^2 - x + 4$ and $g(x)$
Find $(f - g)(x)$.

Previous Answer: $-x^2 + 5x + 1$
3. Let $f(x) = x^2 - 1$ and $g(x) = x - 1$.
Find $(\frac{f}{g})(x)$.

Previous Answer: $x^2 - 9$ an
6. Let $f(x) = x^2 -$
Find $(\frac{g}{f})(x)$.

Previous Answer: $3x^2 + 10x + 8$
5. Let $f(x) = x - 4$ and $g(x) = x^2 + 4x + 4$.

Composition of Functions Circuit *includes*:

✅ 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

Challenge: Let $f(x) = x^2 - 4$ and $g(x) = x + 2$. Find $(f \cdot g)(x) + (f - g)(x)$.

How are you feeling about this topic? Circle one:

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

Adding Functions: $(f + g)(x) = f(x) + g(x)$

Subtracting Functions: $(f - g)(x) = f(x) - g(x)$ *watch for sign changes!

Multiplying Functions: $(f \cdot g)(x) = f(x) \cdot g(x)$

Dividing Functions: $(\frac{f}{g})(x) = \frac{f(x)}{g(x)}$ *simplify if possible!

How are you feeling about this topic? Circle one:

Function Operations Circuit Worksheet

standards aligned:

CCSS: HSF-BF.A.1.b

TEKs: A1.10.A, A1.10.B, A1.10.C

VA SOLs: EO.A.2.b

how this circuit resource works

Students can track their path at the top.

Students start with the first question.

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.

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Name: _____   Date: _____

FUNCTION OPERATIONS 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: $x^2 - 1$ #____	Previous Answer: $-10x^3 + 2x^2 - 3x + 6$ #____
1. Let $f(x) = 2x + 5$ and $g(x) = x^2 - 3$. Find $(f + g)(x)$.	2. Let $f(x) = 4x$ and $g(x) = x - 1$. Find $(g - f)(x)$.
Previous Answer: $\dfrac{x + 2}{3x}$ #____	Previous Answer: $x^2 + 2x + 2$ #____
3. Let $f(x) = x^2 + 2x$ and $g(x) = 5x$. Find $(f \cdot g)(x)$.	4. Let $f(x) = 3x - 4$ and $g(x) = x + 6$. Find $(f - g)(x)$.

how to use this resource

This is a great activity to use when reviewing how to add, subtract, multiply and divide functions.

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

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

You may also *enjoy*...

FUNCTION OPERATIONS

Self-Checking

OPERATIONS & COMPOSITION OF FUNCTIONS

Algebra 2 Guided Notes

Answer key included

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SYNTHETIC DIVISION

Differentiated Circuit Worksheet

2 versions + answer key included

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hey there!

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