

Week of April 6-10, 2020

High School Science

William Sewell

Communication: email: william.sewell@oakland5.org or Google Hangout-Meet

Office hours: Monday and Wednesday: 12:00 to 2:00 p.m., Tuesday and Thursday: 12:00 to 1:00 p.m.

Due Date: All assignments are due 4/13/2020 either by sending a picture of it and turning it into Google Classroom or turning it into boxes located in the Lake Crest foyer.


Assignments: All assignments will be in "Google Classroom" and a paper copy will be provide from the Oakland main office. This week will provide time for everyone to "catch up" on their assignments and provide opportunities for others to move forward. A lot of these assignments are duplicates from what was assigned on 3/16/2020, but a few new. I will have office hours as listed above which we can review the assignments given, and I will help you as much as needed. However, the expectation is the same as it was before. I expect you to have made a serious effort to complete the assignment, before asking for help. You will not learn anything with me just giving you the answers.

Class	Choice 1	Choice 2	Choice 3 (Enrichment)
Earth Science	Chapter 25: Worksheets, p.35-36, and p.37-38.	Chapter 25 Test, p.45-47	Chapter 26, worksheets, p.59-60, 61-62, p.63-64.
Physical Science	Chapter 13: Worksheet- p.19-20, 29-30	Chapter 13: Worksheet- p.31-32	Chapter 13: Review Worksheet, p.35-36, and the Chapter Test, p.37-38
Chemistry	Unit 4: Worksheet 3 and 4	Unit 4 Test (To be completed with notes and other resources)	Unit 5: Relative Mass Lab video and write-up
Pre-calculus	Complete Composite Function WS	Complete Composite Function Quiz 1 and Quiz 2	Complete Composite Functions Unit Test on Khan or paper version. If you are finished with this you can start working through the unit on trigonometry.

Due Apr 13

Pre Calculus

Assignment for Week of 4/6/2020

10 points 

William Sewell 12:32 PM

You can choose between the following assignments. I know a few of you have already completed most of this already, but I wanted to give everyone a chance to catch-up. You can complete this assignment in Khan Academy or get a hard copy of it from the school office.

Choice #1: Complete the composite function worksheet.

Choice #2: Complete the two composite function quizzes (Quiz 1 and quiz 2).

Choice #3: Complete the composite function test or move on the unit on trigonometry.

PreCalc/US
#1

Sewell/Pre-Calc/Apr. 6-10
Choice #1

COMPOSITE FUNCTION Worksheet

Evaluate each composite value

1. If $f(x) = 3x - 5$ and $g(x) = x^2$, find $(f \circ g)(3)$ and $(g \circ f)(3)$
2. If $f(x) = -9x - 9$ and $g(x) = \sqrt{x - 9}$, find $(f \circ g)(10)$ and $(f \circ f)(-2)$
3. If $f(x) = -4x + 2$ and $g(x) = \sqrt{x - 8}$, find $(f \circ g)(12)$ and $(f \circ f)(5)$
4. If $f(x) = -3x + 4$ and $g(x) = x^2$, find $(g \circ f)(-2)$ and $(f \circ g)(-2)$
5. If $f(x) = -2x + 1$, $g(x) = \sqrt{x^2 - 5}$, $h(x) = 5x$ find $(h \circ g \circ f)(2)$ and $f(4h(3))$

QUIZ #1



PRE-CALCULUS
#2

Pre-Calculus: Precalculus

Assignment content

W
as

Evaluate composite functions

Student view

Students will do 4 of these 20 questions

$$f(x) = x^2 - 6x +$$

$$g(x) = \sqrt{x-2}$$



$$f(g(11)) =$$

$$f(x) = 3 \cdot 2^x$$

$$h(x) = 2x - 7$$

$$h(f(2)) =$$

$$g(x) = \frac{3x-5}{x+1}$$

$$h(y) = \sqrt{1-3y}$$

$$h(g(0)) =$$

$$f(a) = 3(a+2)^2$$

$$g(b) = \frac{2}{5}b + 4$$



$$g(f(-2)) =$$

$$f(t) = \frac{2t+7}{t-3}$$

$$h(n) = -2n^2 - 3n$$



$$f(h(-1)) =$$

$$g(x) = \frac{1}{3}(x+1)$$

$$h(x) = \frac{x^2-1}{x+3}$$

$$(g \circ h)(5) =$$

$$f(x) = 3 \cdot \sqrt{3x+}$$

$$g(x) = x^2 - 7x$$



$$g(x) = x^2 + 5x -$$

$$h(y) = 3(y-1)^2$$



$$(h \circ g)(-6) =$$

$$f(n) = 2 \left(\frac{1}{3} \right)^{n-1}$$

$$h(t) = \frac{t+4}{t-2}$$



Evaluating composite functions: using tables
Video · 4 minutes

HSF.BF.A.1c



Evaluating composite functions: using graphs

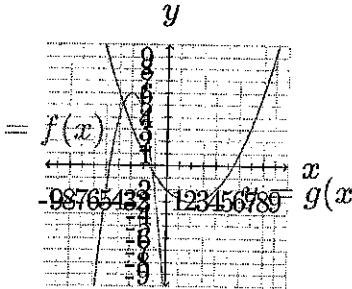
W
at X

Evaluate composite functions: graphs & tables

Student view

Students will do 4 of these 30 questions

The graphs of the equations $y = f(x)$ and $y = g(x)$ are shown in the grid below.



Which of the following best approximates the value of $g(f(-5))$?

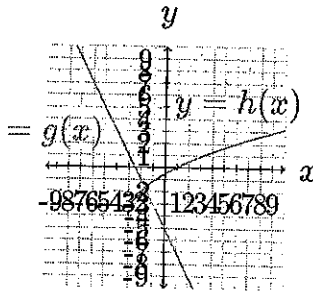
Choose 1 answer:

A -18

B -2

C 1

The graphs of the equations $y = g(x)$ and $y = h(x)$ are shown in the grid below.



Which of the following best approximates the value of $g(h(1))$?

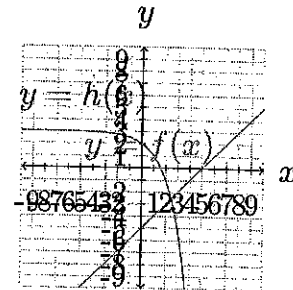
Choose 1 answer:

A -7

B -5

C 0

The graphs of the equations $y = f(x)$ and $y = h(x)$ are shown in the grid below.



Which of the following best approximates the value of $f(h(2))$?

Choose 1 answer:

A -6

B -3

C -1

> Evaluating composite functions: using tables
Video · 4 minutes

KSF.BPA.1c

> Evaluating composite functions: using graphs

Pre-Calculus: Precalculus

Assign content

W
as

Find composite functions

Student view

Students will do 4 of these 20 questions

$$g(x) = 3x - 5$$

$$h(x) = \frac{2}{2x + 3}$$

Write $h(g(x))$ as an expression in terms of x .

$$h(g(x)) =$$

$$f(x) = 2x + 3$$

$$g(x) = x^2 - 3x +$$

Write $g(f(x))$ as an expression in terms of x .

$$g(f(x)) =$$

$$f(x) = x^3 - 6$$

$$h(x) = \sqrt[3]{2x - 15}$$

Write $f(h(x))$ as an expression in terms of x .

$$f(h(x)) =$$

$$g(x) = 15 - 4x$$

$$h(x) = \frac{3}{2}x + 8$$

Write $g(h(x))$ as an expression in terms of x .

$$g(h(x)) =$$

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

$$g(x) = \frac{x^2 - 12}{x^2 + 4}$$

Write $g(f(x))$ as an expression in terms of x .

$$g(f(x)) =$$

$$f(x) = (3x - 5)^3$$

$$h(x) = 2\sqrt[3]{x} + 8$$

Write $h(f(x))$ as an expression in terms of x .

$$h(f(x)) =$$

> Evaluating composite functions: using tables
Video · 4 minutes

HSF.BF.A.1c

> Evaluating composite functions: using graphs

QUIZ #2 Khan Academy

Pre-calculus
#2

Pre-Calculus: Precalculus

Assign content

Sewell / Pre-Cal of Apr. 6-10

Choice #2, p. 4 of 6

Was

X

Verify inverse functions

Student view

Students will do 4 of these 20 questions

$$f(x) = (x + 7)^3 - 1$$

and

$$g(x) = \sqrt[3]{x + 1} - 7$$

Write simplified expressions for $f(g(x))$ and $g(f(x))$ in terms of x .

$$f(g(x)) =$$

$$g(f(x)) =$$

Are functions f and g inverses?

Choose 1 answer:

A Yes

B No

$$g(x) = (2x - 5)^3$$

and

$$h(x) = \frac{\sqrt[3]{x} + 5}{2}$$

Write simplified expressions for $g(h(x))$ and $h(g(x))$ in terms of x .

$$g(h(x)) =$$

$$h(g(x)) =$$

Are functions g and h inverses?

Choose 1 answer:

A Yes

B No

$$f(x) = \sqrt[3]{9x + 4}$$

and

$$h(x) = \frac{x^3 - 4}{9}$$

Write simplified expressions for $f(h(x))$ and $h(f(x))$ in terms of x .

$$f(h(x)) =$$

$$h(f(x)) =$$

Are functions f and h inverses?

Choose 1 answer:

A Yes

B No

> Evaluating composite functions: using tables
Video • 4 minutes

HSF.BF.A.1c

> Evaluating composite functions: using graphs

Pre-calculus #2



Sewell / Pre-Calc / Apr. 6 - 10

Choice = 2, p. 5 of 6

Pre-Calculus: Precalculus

Assign content

W
at

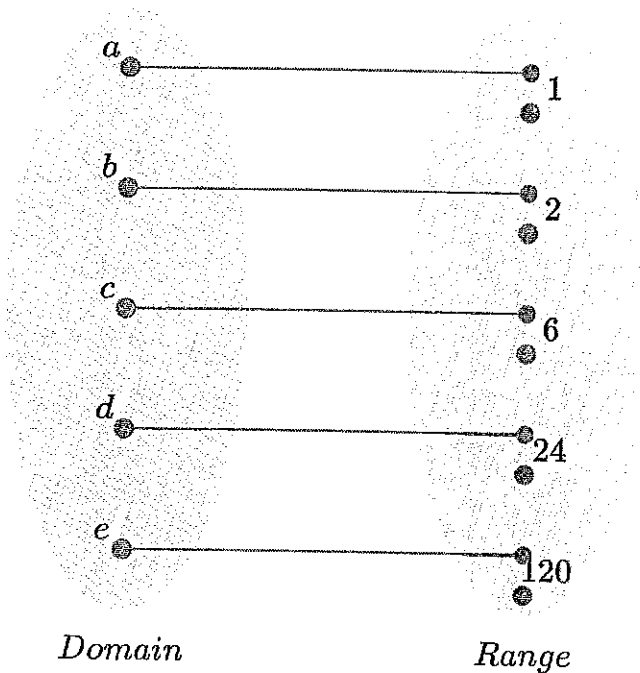


Determine if a function is invertible

Full question list

Build the mapping diagram of f by dragging the endpoints of the segments in the graph below so that they pair each domain element with its correct range element.

Then, determine if f is invertible.



Choose 1 answer:



f is invertible



Do 4 problems ○ ○ ○ ○

Check



Evaluating composite functions: using tables
Video - 4 minutes

HSFBFA.1c



Evaluating composite functions: using graphs



Pre-Calculus #2

Pre-Calculus: Precalculus

Search / Pre-Cal / Apr. 6-10

Choice # 2, p. 6 of 6

Assign content

Restrict domains of functions to make them invertible

Student view

W X

Students will do 4 of these 16 questions

To which intervals could we restrict the domain of f to make it an invertible function?

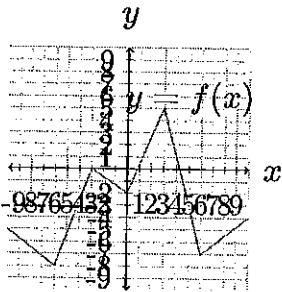
Choose all answers that apply:

A $-3 \leq x \leq 1$

B $-5 \leq x \leq 5$

C $5 \leq x \leq 9$

D None of the above



To which intervals could we restrict the domain of f to make it an invertible function?

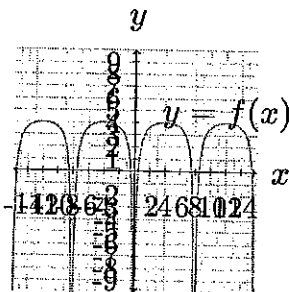
Choose all answers that apply:

A $1 \leq x \leq 10$

B $-3 \leq x \leq 3$

C $-10 \leq x \leq$

D None of the above



To which intervals could we restrict the domain of f to make it an invertible function?

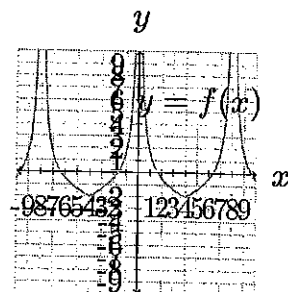
Choose all answers that apply:

A $-4 \leq x \leq 4$

B $-9 \leq x \leq -$

C $-2 \leq x \leq 1$

D None of the above



> Evaluating composite functions: using tables
Video · 4 minutes

HSF.BFA.1c

> Evaluating composite functions: using graphs



Pre-Calculus
#3 p. 1 of 6

Pre-Calculus: Precalculus

ASSIGNMENT

Composite Functions Test

Sewell
Apr. 6-10

W
at



Evaluate composite functions

Student view

Students will do 4 of these 20 questions

$$f(x) = x^2 - 6x +$$

$$g(x) = \sqrt{x - 2}$$

$$f(g(11)) =$$

$$f(x) = 3 \cdot 2^x$$

$$h(x) = 2x - 7$$

$$h(f(2)) =$$

$$g(x) = \frac{3x - 5}{x + 1}$$

$$h(y) = \sqrt{1 - 3y}$$

$$h(g(0)) =$$

$$f(a) = 3(a + 2)^2$$

$$g(b) = \frac{2}{5}b + 4$$

$$g(f(-2)) =$$

$$f(t) = \frac{2t + 7}{t - 3}$$

$$h(n) = -2n^2 - 3n$$

$$f(h(-1)) =$$

$$g(x) = \frac{1}{3}(x + 1)$$

$$h(x) = \frac{x^2 - 1}{x + 3}$$

$$(g \circ h)(5) =$$

$$f(x) = 3 \cdot \sqrt{3x +}$$

$$g(x) = x^2 - 7x$$

$$g(x) = x^2 + 5x -$$

$$h(y) = 3(y - 1)^2$$

$$(h \circ g)(-6) =$$

$$f(n) = 2 \left(\frac{1}{3} \right)^{n-1}$$

$$h(t) = \frac{t + 4}{t - 2}$$



Evaluating composite functions: using tables
Video - 4 minutes

HSF.BF.A.1c



Evaluating composite functions: using graphs



Pre-Calculus #3 p. 2 of 6

Pre-Calculus: Precalculus
Essential Questions

Composite Function Test

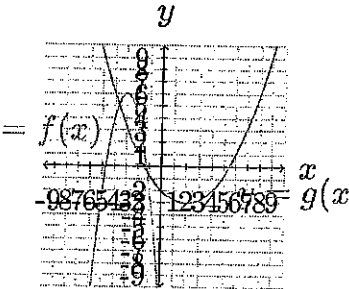
Sewell
Apr. 6-10

Evaluate composite functions: graphs & tables

Student view

Students will do 4 of these 30 questions

The graphs of the equations $y = f(x)$ and $y = g(x)$ are shown in the grid below.



Which of the following best approximates the value of $g(f(-5))$?

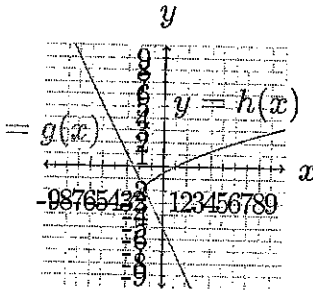
Choose 1 answer:

A -18

B -2

C 1

The graphs of the equations $y = g(x)$ and $y = h(x)$ are shown in the grid below.



Which of the following best approximates the value of $g(h(1))$?

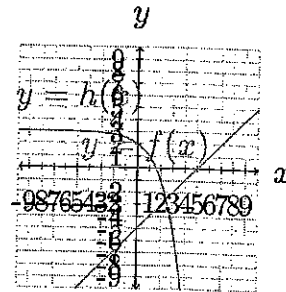
Choose 1 answer:

A -7

B -5

C 0

The graphs of the equations $y = f(x)$ and $y = h(x)$ are shown in the grid below.



Which of the following best approximates the value of $f(h(2))$?

Choose 1 answer:

A -6

B -3

C -1

Evaluating composite functions: using tables
Video - 4 minutes

HSF8FA.1c

Evaluating composite functions: using graphs



Pre-Calculus
 #3 p. 3 of 6
 Sewell
 Apr. 6-10

Pre-Calculus: Precalculus

SS:11-12.ESS.1-2
 SS:11-12.ESS.1-2

W
 as

X

Composite Functions Test

Find composite functions

Student view

Students will do 4 of these 20 questions

$$g(x) = 3x - 5$$

$$h(x) = \frac{2}{2x + 3}$$

Write $h(g(x))$ as an expression in terms of x .

$$h(g(x)) =$$

$$f(x) = 2x + 3$$

$$g(x) = x^2 - 3x +$$

Write $g(f(x))$ as an expression in terms of x .

$$g(f(x)) =$$

$$f(x) = x^3 - 6$$

$$h(x) = \sqrt[3]{2x - 15}$$

Write $f(h(x))$ as an expression in terms of x .

$$f(h(x)) =$$

$$g(x) = 15 - 4x$$

$$h(x) = \frac{3}{2}x + 8$$

Write $g(h(x))$ as an expression in terms of x .

$$g(h(x)) =$$

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

$$g(x) = \frac{x^2 - 12}{x^2 + 4}$$

Write $g(f(x))$ as an expression in terms of x .

$$g(f(x)) =$$

$$f(x) = (3x - 5)^3$$

$$h(x) = 2\sqrt[3]{x} + 8$$

Write $h(f(x))$ as an expression in terms of x .

$$h(f(x)) =$$

> Evaluating composite functions: using tables
 Video · 4 minutes

HSF.BF.A.1c

> Evaluating composite functions: using graphs

QUIZ #2 Khan Academy

Pre-Calculus
#3 p. 4 of 6

Pre-Calculus: Pre-calculus

ASSIGNMENT

Composite Functions Test

Sewell
Apr. 6-10W
at

Verify inverse functions

Student view

Students will do 4 of these 20 questions

$$f(x) = (x + 7)^3 - 1$$

and

$$g(x) = \sqrt[3]{x + 1} - 7$$

Write simplified expressions for $f(g(x))$ and $g(f(x))$ in terms of x .

$$f(g(x)) =$$

$$g(f(x)) =$$

Are functions f and g inverses?

Choose 1 answer:

 A Yes

 B No

$$g(x) = (2x - 5)^3$$

and

$$h(x) = \frac{\sqrt[3]{x} + 5}{2}$$

Write simplified expressions for $g(h(x))$ and $h(g(x))$ in terms of x .

$$g(h(x)) =$$

$$h(g(x)) =$$

Are functions g and h inverses?

Choose 1 answer:

 A Yes

 B No

$$f(x) = \sqrt[3]{9x + 4}$$

and

$$h(x) = \frac{x^3 - 4}{9}$$

Write simplified expressions for $f(h(x))$ and $h(f(x))$ in terms of x .

$$f(h(x)) =$$

$$h(f(x)) =$$

Are functions f and h inverses?

Choose 1 answer:

 A Yes

 B No


Evaluating composite functions: using tables
Video · 4 minutes

HSF.BF.A.1c



Evaluating composite functions: using graphs



Pre-Calculus #3

Pre-Calculus: Precalculus
Assignments

Composite Functions Test

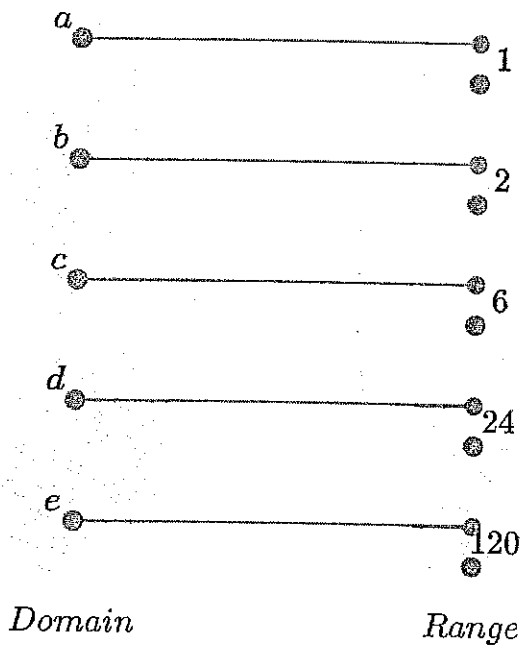
p. 5 of 6
Sewell
Apr. 6-10
Full question list

Determine if a function is invertible

W
X

Build the mapping diagram of f by dragging the endpoints of the segments in the graph below so that they pair each domain element with its correct range element.

Then, determine if f is invertible.



Choose 1 answer:

f is invertible

20

Do 4 problems ○○○○

Check

Evaluating composite functions: using tables
Video - 4 minutes

HSF.BFA.1c

Evaluating composite functions: using graphs



Pre-calculus #3 p. 6 of 6
Sewell
Apr. 6-10

Pre-Calculus: Precalculus

Composite Functions Test

ASSIGNMENT

Restrict domains of functions to make them invertible

Student view

W
at X

Students will do 4 of these 16 questions

To which intervals could we restrict the domain of f to make it an invertible function?

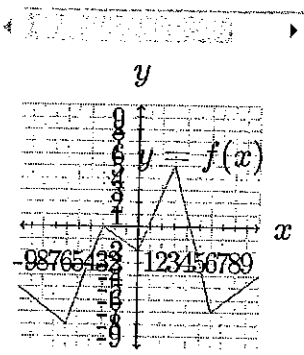
Choose all answers that apply:

A $-3 \leq x \leq 1$

B $-5 \leq x \leq 5$

C $5 \leq x \leq 9$

D None of the above



Evaluating composite functions: using tables
Video · 4 minutes

To which intervals could we restrict the domain of f to make it an invertible function?

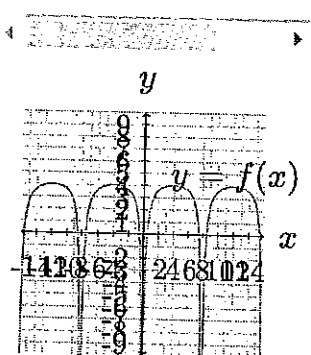
Choose all answers that apply:

A $1 \leq x \leq 10$

B $-3 \leq x \leq 3$

C $-10 \leq x \leq$

D None of the above



Evaluating composite functions: using graphs

To which intervals could we restrict the domain of f to make it an invertible function?

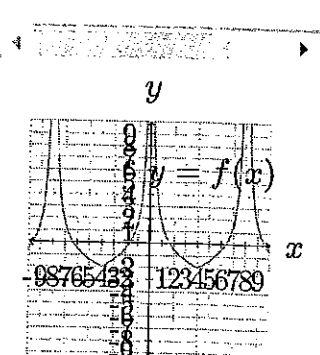
Choose all answers that apply:

A $-4 \leq x \leq 4$

B $-9 \leq x \leq -$

C $-2 \leq x \leq 1$

D None of the above



KSEBFA.1c