

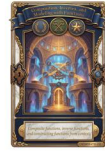
Composition, Inverses, and Modeling with Functions

Composite functions, inverse functions, and constructing functions from context.

Name _____ Date _____

32 main 2-up grid 11 pages visible side quests

Completion Reward



Shown here as a small pack artifact, not a preview destination.

1. What does $f(g(x))$ mean?

x	g(x)	f(g(x))
3	5	11
4	6	13

In $f(g(x))$, evaluate the inside function first and then use that result as the input to the outside function.

- A. Use the output of g as the input of f .
- B. Multiply f and g .
- C. Find the inverse of f first.
- D. Add the inputs of f and g .

1.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f \circ g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

2. What does an inverse function do?

f	f^{-1}
2 → 9	9 → 2
4 → 11	11 → 4

If f maps an input to an output, f^{-1} sends that output back to the original input.

- A. It multiplies all outputs by -1 .
- B. It always takes reciprocals.
- C. It forces the graph to be quadratic.
- D. It reverses the original input-output mapping.

2.3. Which notation names the inverse function?

- A. $1 / f(x)$
- B. $f^{-1}(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

1.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

1.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $(f \circ g)(1)$?

- A. 2
- B. 4
- C. 6
- D. 8

2.1. An inverse function does what?

- A. adds 1 to every output
- B. undoes the original function
- C. takes a reciprocal
- D. reflects across the x -axis

2.4. To start finding the inverse of $y = 4x - 7$, what should you do first?

- A. swap x and y
- B. factor the equation
- C. find the slope
- D. set $y = 0$

1.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

1.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

2.2. Why must a function be one-to-one to have an inverse that is also a function?

- A. so each output comes from only one input
- B. so the slope is positive
- C. so the graph is curved
- D. so the intercept is 0

2.5. A function and its inverse reflect across:

- A. the x -axis
- B. the y -axis
- C. the line $y = x$
- D. the origin

3. Why must a function be one-to-one to have an inverse that is also a function?

- A. Otherwise the graph would not have a y-intercept.
- B. Otherwise the domain would have to be empty.
- C. Repeated outputs would force one inverse input to map to multiple outputs.
- D. Otherwise the function would become linear.

3.3. Which notation names the inverse function?

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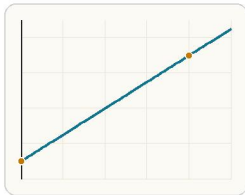
4. In a cost model $C(x)$, what does x usually represent?

- A. The cost itself
- B. The input quantity being used to determine cost
- C. The graph's slope only
- D. The y-intercept only

4.3. What does $y = f(x) + 3$ do to a graph?

- A. shifts left 3
- B. shifts right 3
- C. shifts up 3
- D. shifts down 3

5. In $C(x) = 20 + 3x$, what does the 20 represent?



In a linear cost model, the intercept is the fixed fee and the slope is the added cost per unit.

- A. A fixed starting cost
- B. The number of items
- C. A percent growth rate
- D. The inverse input

5.3. What does $y = f(x) + 3$ do to a graph?

- A. shifts left 3
- B. shifts right 3
- C. shifts up 3
- D. shifts down 3

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- B. factor the equation
- C. find the slope
- D. set $y = 0$

4.1. If $f(x) = x + 2$ and $g(x) = 3x$, what is $f(g(2))$?

- A. 6
- B. 8
- C. 10
- D. 12

4.4. What does $y = f(x - 2)$ do to a graph?

- A. shifts left 2
- B. shifts right 2
- C. shifts up 2
- D. reflects across the y-axis

5.1. If $f(x) = x + 2$ and $g(x) = 3x$, what is $f(g(2))$?

- A. 6
- B. 8
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- A. so each output comes from only one input
- B. so the slope is positive
- C. so the graph is curved
- D. so the intercept is 0

3.5. A function and its inverse reflect across:

- A. the x-axis
- B. the y-axis
- C. the line $y = x$
- D. the origin

4.2. A function has an inverse only if it is:

- A. one-to-one
- B. quadratic
- C. constant
- D. undefined at 0

4.5. Which expression is the reciprocal of $f(x)$?

- A. $f^{-1}(x)$
- B. $1 / f(x)$
- C. $f(x) - 1$
- D. $-f(x)$

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- B. $1 / f(x)$
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6. Which notation names the inverse function of f ?

- A. $f^{-1}(x)$
- B. $1 / f(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

6.3. Which notation names the inverse function?

- A. $1 / f(x)$
- B. $f^{-1}(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

7. Which is done first in $f(g(4))$?

- A. $f(4)$
- B. $g(4)$
- C. $f(g)$
- D. the inverse of f

7.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

8. What should happen when a function and its inverse are composed?

- A. The output should always double.
- B. The graph should become quadratic.
- C. The domain should disappear.
- D. The original input should come back.

8.3. Which notation names the inverse function?

- A. $1 / f(x)$
- B. $f^{-1}(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

6.1. An inverse function does what?

- A. adds 1 to every output
- B. undoes the original function
- C. takes a reciprocal
- D. reflects across the x -axis

6.4. To start finding the inverse of $y = 4x - 7$, what should you do first?

- A. swap x and y
- B. factor the equation
- C. find the slope
- D. set $y = 0$

7.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

7.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

8.1. An inverse function does what?

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- B. undoes the original function
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6.2. Why must a function be one-to-one to have an inverse that is also a function?

- A. so each output comes from only one input
- B. so the slope is positive
- C. so the graph is curved
- D. so the intercept is 0

6.5. A function and its inverse reflect across:

- A. the x -axis
- B. the y -axis
- C. the line $y = x$
- D. the origin

7.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
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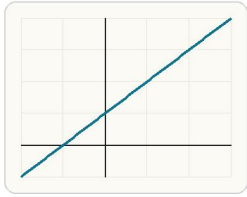
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9. Which graph description is most likely one-to-one?



A one-to-one graph gives a unique output for each input and a unique input for each output, which makes an inverse possible.

- A. A parabola opening upward
- B. A circle
- C. A line with nonzero slope
- D. A horizontal line

9.3. Which notation names the inverse function?

- A. $1 / f(x)$
- B. $f^{-1}(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

10. Which model shows a \$15 fixed fee plus \$2 per ticket?

- A. $C(t) = 2 + 15t$
- B. $C(t) = 17t$
- C. $C(t) = 15 + 2t$
- D. $C(t) = 15 / 2t$

10.3. What does $y = f(x) + 3$ do to a graph?

- A. shifts left 3
- B. shifts right 3
- C. shifts up 3
- D. shifts down 3

11. Which model shows an initial amount of 100 that grows by 10% each period?

- A. $A(t) = 100 + 10t$
- B. $A(t) = 100(1.1)^t$
- C. $A(t) = 110t$
- D. $A(t) = 10(100)^t$

11.3. What does $y = f(x) + 3$ do to a graph?

- A. shifts left 3
- B. shifts right 3
- C. shifts up 3
- D. shifts down 3

9.1. An inverse function does what?

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- D. set $y = 0$

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12. If f sends 2 to 9, what must f^{-1} send 9 to?

original	inverse
2 \rightarrow 9	9 \rightarrow 2
5 \rightarrow 14	14 \rightarrow 5

If the original function sends 2 to 9, the inverse must send 9 back to 2.

- A. 9
- B. 2
- C. -2
- D. 0

12.3. Which notation names the inverse function?

- A. $1 / f(x)$
- B. $f^{-1}(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

13. What is the best first step when finding the inverse of $y = 2x + 7$?

- A. Take a reciprocal.
- B. Swap x and y .
- C. Square both sides.
- D. Set y equal to 0.

13.3. Which notation names the inverse function?

- A. $1 / f(x)$
- B. $f^{-1}(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

14. What is the best first step when finding $g(f(3))$?

- A. Evaluate $g(3)$ first.
- B. Swap x and y .
- C. Evaluate $f(3)$ first.
- D. Take a reciprocal.

14.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f \circ g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

12.1. An inverse function does what?

- A. adds 1 to every output
- B. undoes the original function
- C. takes a reciprocal
- D. reflects across the x -axis

12.4. To start finding the inverse of $y = 4x - 7$, what should you do first?

- A. swap x and y
- B. factor the equation
- C. find the slope
- D. set $y = 0$

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- A. 7
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14.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $(f \circ g)(1)$?

- A. 2
- B. 4
- C. 6
- D. 8

12.2. Why must a function be one-to-one to have an inverse that is also a function?

- A. so each output comes from only one input
- B. so the slope is positive
- C. so the graph is curved
- D. so the intercept is 0

12.5. A function and its inverse reflect across:

- A. the x -axis
- B. the y -axis
- C. the line $y = x$
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14.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

14.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

15. A student says $f^{-1}(x)$ always means $1/f(x)$. What is the mistake?

- A. Inverse notation names a reversed mapping, not a reciprocal output.
- B. They should square the function first.
- C. They should replace x with 0.
- D. They should change the slope sign only.

15.3. Which notation names the inverse function?

- A. $1/f(x)$
- B. $f^{-1}(x)$
- C. $-f(x)$
- D. $f(x)^{-1}$ only

16. If $f(x) = 2x + 1$ and $g(x) = x - 3$, find $f(g(5))$. Answer with a number.

16.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

17. If $f(x) = 2x + 1$ and $g(x) = x - 3$, find $g(f(4))$. Answer with a number.

17.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

15.1. An inverse function does what?

- A. adds 1 to every output
- B. undoes the original function
- C. takes a reciprocal
- D. reflects across the x -axis

15.4. To start finding the inverse of $y = 4x - 7$, what should you do first?

- A. swap x and y
- B. factor the equation
- C. find the slope
- D. set $y = 0$

16.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

16.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

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- A. the x -axis
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- C. the line $y = x$
- D. the origin

16.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

16.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
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- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

18. If $h(x) = 3x - 4$, find $h^{-1}(11)$. Answer with a number.

18.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

18.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

- A. 4
- B. 5
- C. 10
- D. 15

18.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

18.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

18.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. 1
- B. 2
- C. 3
- D. 4

- A. 2
- B. 4
- C. 6
- D. 8

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

19. If $C(x) = 20 + 3x$, find $C(4)$. Answer with a number.

19.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

19.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 7
- B. 9
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- A. 1
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20. If $C(F) = (F - 32) \cdot 5 / 9$, find $C(68)$. Answer with a number.

20.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

20.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

- A. 4
- B. 5
- C. 10
- D. 15

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- A. 1
- B. 2
- C. 3
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- B. 4
- C. 6
- D. 8

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

21. If $p(x) = x^2$ and $q(x) = x + 2$, find $p(q(3))$.
Answer with a number.

21.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

21.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

21.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

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- A. 2
- B. 4
- C. 6
- D. 8

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- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

22. If $f(x) = x + 1$ and $g(x) = \sqrt{x}$, find $f(g(9))$.
Answer with a number.

22.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

22.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

22.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

22.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

22.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

23. If $R(q) = 12q$, find $R(7)$. Answer with a number.

23.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

23.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

23.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

23.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

23.5. How is $f(g(x))$ different from $f(x) + g(x)$?

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- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

24. Which student correctly writes $f(g(x))$ when $f(x) = x + 4$ and $g(x) = 2x - 1$?

- A. Student B: $f(g(x)) = x + 4 + 2x - 1$ without substitution.
- B. Student C: $f(g(x)) = 2(x + 4) - 1$.
- C. Student D: $f(g(x)) = x + 4(2x - 1)$.
- D. Student A: $f(g(x)) = (2x - 1) + 4$.

24.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

24.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

24.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

24.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

24.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

25. If $f(x) = 3x - 1$ and $g(x) = x^2$, write $f(g(x))$. Answer as an equation.

25.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

25.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

25.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

25.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

25.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

26. If $f(x) = 3x - 1$ and $g(x) = x^2$, write $g(f(x))$. Answer as an equation.

26.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

26.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

26.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

26.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

26.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

27. Find the inverse of $f(x) = 2x + 3$. Answer as an equation.

27.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

27.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

27.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

27.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

27.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

28. Find the inverse of $g(x) = 5x - 1$. Answer as an equation.

28.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

28.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

28.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

28.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

28.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

29. Write the Celsius conversion model in terms of Fahrenheit F . Answer in the form $C = \dots$

29.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

29.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

29.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

29.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

29.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

30. Write a revenue model for \$12 per ticket sold, using q for tickets. Answer in the form $R = \dots$

30.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

30.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

30.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

30.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

30.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

31. Write a cost model with \$20 fixed cost and \$3 per item, using x for items. Answer in the form $C = \dots$

31.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

31.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

31.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

31.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

31.5. How is $f(g(x))$ different from $f(x) + g(x)$?

- A. composition uses one output as the next input
- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs

32. If shipping adds \$6 after item cost $p(x)$, write the composite rule. Answer as an expression in terms of $p(x)$.

32.1. If $f(x) = x + 1$ and $g(x) = 2x$, what is $(f + g)(3)$?

- A. 7
- B. 9
- C. 10
- D. 12

32.2. If $f(x) = x + 2$ and $g(x) = x - 1$, what is $(fg)(3)$?

- A. 4
- B. 5
- C. 10
- D. 15

32.3. If $f(x) = x + 6$ and $g(x) = x$, what is $(f/g)(3)$?

- A. 1
- B. 2
- C. 3
- D. 4

32.4. If $f(x) = x + 4$ and $g(x) = 2x$, what is $f(g(1))$?

- A. 2
- B. 4
- C. 6
- D. 8

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- B. they always mean the same thing
- C. composition always multiplies
- D. addition is only for graphs