

Name:

Period:

First Score:	First attempt due:	Final Score:
	Final corrections due:	

Practice:
Function Operations & Composition

Perform the indicated operation and simplify completely. Show all work to get credit.

$f(x) = 10x$	$g(x) = -5x$	$h(x) = 8$	$j(x) = -10$
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1] $(f + j)(x) =$

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

3] $(g \cdot h)(x) =$

4] $\left(\frac{g}{j}\right)(x) =$

5] $(h - g)(5) =$

6] $(f \cdot g)(-1) =$

$f(x) = 6x + 4$	$g(x) = 4 - 6x$	$h(x) = 2x$	$j(x) = -2$
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7] $(f + g)(x) =$

8] $(f - g)(x) =$

9] $(f \cdot j)(x) =$

10] $\left(\frac{g}{j}\right)(x) =$

11] $(h - g)\left(\frac{1}{2}\right) =$

12] $(f \cdot g)\left(-\frac{1}{6}\right) =$

$f(x) = x^2$	$g(x) = 10x + 5$	$h(x) = \sqrt{x}$	$j(x) = 5$
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13] $(f + g)(x) =$

14] $(f - g)(x) =$

15] $(f \cdot j)(x) =$

16] $\left(\frac{g}{j}\right)(x) =$

17] $(h + j)(49) =$

18] $(f \cdot h)(4) =$

Use the tables of ordered pairs to determine the value of each composite function.

$f(x) = x^2 - 15$		$g(x) = \sqrt{x}$	
x	$f(x)$	x	$g(x)$
1	-14	1	1
2	-11	4	2
3	-6	9	3
4	1	16	4
5	10	25	5
6	21	36	6
7	34	49	7

19] $(f \circ g)(36) =$

20] $(g \circ g)(16) =$

21] $(g \circ f)(4) =$

22] $(f \circ f)(4) =$

Use the graph to determine the value of each composite function.

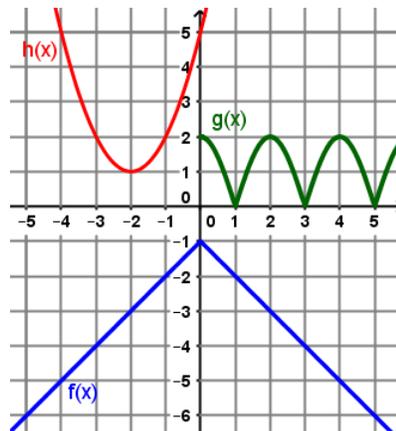
23] $(h \circ f)(3) =$

24] $(f \circ g)(4) =$

25] $(f \circ f)(-4) =$

26] $(g \circ g)(1) =$

27] $(g \circ h)(0) =$



Use the functions to determine the value of each composite function algebraically.

$f(x) = 2x^2$	$g(x) = 3x - 2$	$h(x) = 3 - 4x$	$j(x) = \frac{6}{x}$
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28] $(f \circ g)(3) =$

29] $(h \circ j)(12) =$

30] $(g \circ h)(x) =$

31] $(h \circ g)(x) =$

32] Sally Salesperson sells shoes part time at Super Shoes in the South Street Mall. She earns a 2% commission on total sales over \$5,000, which is paid as a bonus at the end of the year.

Let her total sales be represented by x . $f(x) = x - 5000$ and $g(x) = 0.02x$

Which composition of functions would calculate her bonus at the end of the year? $(f \circ g)(x)$ or $(g \circ f)(x)$? Explain your reasoning.

33] Sally sold \$9,172 in shoes this year. Use composition of functions to calculate her bonus. Show work.