

NAME _____

DATE _____

Module 9 Using Functions
Lesson 6 Evaluating Composite Functions



**additional
practice**

Evaluate.

1. $(f \circ g)(3)$ and $(g \circ f)(3)$

$f(x) = x + 1$

$g(x) = -2x$

2. $(f \circ g)(0)$ and $(g \circ f)(0)$

$f(x) = x - 4$

$g(x) = x + 1$

3. $(f \circ g)(4)$ and $(g \circ f)(4)$

$f(x) = 3x - 2$

$g(x) = 2x + 2$

4. $(f \circ g)(-1)$ and $(g \circ f)(-1)$

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

$g(x) = x^3$

5. $(f \circ g)(-6)$ and $(g \circ f)(-6)$

$f(x) = x^2 + 5$

$g(x) = x + 4$

6. $(f \circ g)(10)$ and $(g \circ f)(10)$

$f(x) = \frac{x+5}{2x}$

$g(x) = x - 5$

7. $(f \circ g)(-1)$ and $(g \circ f)(-1)$

$f(x) = \sqrt{x}$

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

8. $(f \circ g)(7)$ and $(g \circ f)(7)$

$f(x) = x^2 - 20$

$g(x) = x - 20$



For each pair of functions, find $f(g(x))$ and $g(f(x))$.

9. $f(x) = x - 3$
 $g(x) = 4x$

10. $f(x) = x + 6$
 $g(x) = x - 5$

11. $f(x) = \frac{3}{4}x$
 $g(x) = 8x$

12. $f(x) = 3x$
 $g(x) = 2x^2$

13. $f(x) = \sqrt{x - 5}$
 $g(x) = x^2$

14. $f(x) = 3x$
 $g(x) = x^2 + 6$

15. $f(x) = \frac{x}{x - 4}$
 $g(x) = x - 5$

16. $f(x) = -6$
 $g(x) = \sqrt{x - 6}$

Determine whether the given functions are inverse functions.

17. $f(x) = x - 7$
 $g(x) = x + 7$

18. $f(x) = x + 2$
 $g(x) = 2x$

19. $f(x) = 3x$
 $g(x) = \frac{10}{3}x + 10$

20. $f(x) = \frac{1}{5}x - 4$
 $g(x) = 5x + 20$

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