

Name: _____ Date: _____ Period: _____

COMPOSITE FUNCTION WORKSHEET

Directions: Show all work for credit. Work must be neat and answer must be circled.

For 1- 9: Let $f(x) = 2x - 1$, $g(x) = 3x$, and $h(x) = x^2 + 1$. Compute the following:

1. $f(g(-3))$

2. $f(h(7))$

3. $(g \circ h)(24)$

4. $f(g(h(2)))$

5. $h(g(f(5)))$

6. $g(f(h(-6)))$

7. $f(x + 1)$

8. $g(3a)$

9. $h(x - 2)$

For 10-11: Let $f(x) = -3x + 7$ and $g(x) = 2x^2 - 8$. Compute the following:

10. $f(g(x))$

11. $(g \circ f)(x)$

12. If $f(x) = 3x - 5$ and $g(x) = x^2$,
find $(f \circ g)(3)$

13. If $f(x) = -9x - 9$ and $g(x) = \sqrt{x - 9}$,
find $(f \circ g)(10)$

14. If $f(x) = -4x + 2$ and $g(x) = \sqrt{x - 8}$,
find $(f \circ g)(12)$

15. If $f(x) = -3x + 4$ and $g(x) = x^2$,
find $(g \circ f)(-2)$

16. If $f(x) = -2x + 1$ and $g(x) = \sqrt{x^2 - 5}$,
find $(g \circ f)(2)$

17. Given $f(x) = -9x + 3$ and $g(x) = x^4$,
find $(f \circ g)(x)$

18. Given $f(x) = 2x - 5$ and $g(x) = x + 2$,
find $(f \circ g)(x)$

19. Given $f(x) = x^2 + 7$ and $g(x) = x - 3$,
find $(f \circ g)(x)$

20. Given $f(x) = 4x + 3$ and $g(x) = x^2$,
find $(g \circ f)(x)$

21. Given $f(x) = x - 1$ and $g(x) = x^2 + 2x - 8$,
find $(g \circ f)(x)$