

Name: _____ Date: _____

Combining Functions and Composition of Functions PracticeGiven the functions $f(x) = 2x^2 + 3x - 5$ and $g(x) = x^2 + 5x$ and $h(x) = 3x^2$

1. Find $h(x) \cdot g(x)$

2. Find $h(x) + g(x) - f(x)$

3. Find $2g(x) \cdot f(x)$

4. Find $3f(x) - g(x)$

5. Find $-4h(x) + g(x)$

6. Find $g(-2) - 3h(4)$

Given $f(x) = 5x^2 - 9x + 2$ $g(x) = x^2 + 3x - 8$ $h(x) = -2x^2 + 1$ and $k(x) = 4x - 3$

7. Find $4f(x) + 3g(x)$

8. Find $h(x) \cdot k(x)$

9. Find $h(3) + g(-4)$

10. Find $k(x)^2$

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

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

12. $f \circ h(7)$

13. $h \circ g \circ f(5)$

14. $f(x+1)$

15. $g(3a)$

16. $h(x-2)$

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

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

18. $g(f(x))$

19. Find $(g \circ g)(x)$

20. $f \circ g \circ f(4)$
