

Composition of Functions Worksheet

I. 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. $g(h(24))$
4. $h(f(9))$
5. $g(f(0))$
6. $h(g(-4))$
7. $f(g(h(2)))$
8. $h(g(f(5)))$
9. $g(f(h(-6)))$

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

10. $g(f(3))$
11. $f(g(4))$
12. $h(f(-6))$
13. $f(h(-3))$
14. $h(g(11))$
15. $g(h(-9))$
16. $g(h(f(5)))$
17. $h(g(f(13)))$
18. $f(g(h(-8)))$

Answers: 1) -19 2) 99 3) 1728 4) 290 5) -3 6) 145 7) 29 8) 730

9) 219 10) 42 11) -11 12) 13 13) 14 14) 130 15) 110 16) 6 17) 18 18) -81