

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

1.  $f(x) + g(x)$

2.  $g(x) - h(x)$

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

4.  $\frac{f(x)}{g(x)}$

5.  $g(f(0))$

6.  $(h \circ g)(x)$

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

8.  $(h \circ g \circ f)(x)$

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

11.  $f(g(x))$

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

13.  $f(h(x))$

14.  $(h \circ g)(11)$

15.  $g(h(x))$

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

17.  $h(g(f(x)))$

18.  $(f \circ g \circ h)(-8)$