

## Composing Functions HW

Date \_\_\_\_\_ Period \_\_\_\_\_

**Perform the indicated operation.**

1)  $g(x) = -4x - 5$   
 $f(x) = 3x$   
Find  $(g \circ f)(x)$

2)  $h(a) = 3a - 5$   
 $g(a) = a^3 + 3$   
Find  $(h \circ g)(a)$

3)  $f(n) = 2n$   
 $g(n) = -2n^2 + 5n$   
Find  $(f \circ g)(n)$

4)  $h(x) = -2x - 2$   
 $g(x) = -2x - 4$   
Find  $(h \circ g)(x)$

5)  $g(x) = x^3 - 5x$   
 $h(x) = 3x + 1$   
Find  $(g \circ h)(x)$

6)  $h(x) = x^2 - x$   
 $g(x) = 4x - 1$   
Find  $(h \circ g)(x)$

7)  $g(x) = x^3 - 5x$   
 $f(x) = 4x + 2$   
Find  $(g \circ f)(x)$

8)  $g(x) = 3x$   
 $f(x) = x^3 + 4$   
Find  $g(f(x))$

9)  $g(x) = x - 3$   
 $f(x) = x^3 + 3x^2$   
Find  $g(f(x))$

10)  $f(t) = 3t + 4$   
 $g(t) = t^3 - 3$   
Find  $f(g(t))$

11)  $g(a) = a^2 + 1$   
 $f(a) = 4a - 5$   
Find  $g(f(a))$

12)  $g(x) = -2x^2 + 3x$   
 $h(x) = x + 3$   
Find  $g(h(x))$

13)  $g(n) = 3n - 3$   
 $h(n) = n^3 + 4n$   
Find  $g(h(n))$

14)  $g(x) = 2x - 3$   
 $f(x) = -2x^3 + 4x^2$   
Find  $g(f(x))$

15)  $g(n) = -n^2 - n$   
 $h(n) = n - 4$   
Find  $(g \circ h)(8)$

16)  $f(x) = 3x - 4$   
 $g(x) = x^2 - 3x$   
Find  $(f \circ g)(-4)$

17)  $g(n) = 3n + 3$   
 $f(n) = -2n - 5$   
Find  $g(f(3))$

18)  $f(x) = x^2 - 4x$   
 $g(x) = x + 4$   
Find  $f(g(-8))$