HM3 - COMPOSITE FUNCTIONS Name_____

Evaluate each function.

1) $w(a) = \left|-3a + 1\right|$; Find $w(0)$

2) $g(t) = 3^{t+1} + 3$; Find $g(0)$

3) $g(a) = a^2 - 4a$; Find $g(-6)$

4) $w(x) = \left|x\right| - 2$; Find $w(8)$

5) $f(t) = t^2 + t$; Find $f(-5)$

6) $k(t) = -2\left|t\right|$; Find $k(-1)$

7) $f(n) = n^2 - 1$; Find $f(3)$

8) $f(x) = 2\left|x + 2\right| - 1$; Find $f(-5)$

9) $k(x) = x^3 - x^2$; Find $k(4x)$

10) $w(x) = 2x^2 - 5$; Find $w(b + 4)$

11) $k(t) = t^2 - t$; Find $k(t + 3)$

12) $h(n) = n^2 - 1$; Find $h(n - 4)$

13) $f(n) = n^2 - \frac{7}{4}$; Find $f\left(\frac{5}{4}n\right)$

14) $f(a) = \left|a + \frac{1}{2}\right| + \frac{5}{3}$; Find $f\left(\frac{2}{3}a\right)$

Perform the indicated operation.

15) $g(n) = 4n - 5$
$h(n) = -4n + 2$
Find $(g \circ h)(-10)$

16) $g(n) = n^2 + n$
$h(n) = 2n + 1$
Find $(g \circ h)(1)$

17) $f(t) = t^2 - 3$
$g(t) = 3t - 2$
Find $(f \circ g)(-3)$

18) $h(x) = 3x - 3$
$g(x) = -4x$
Find $(h \circ g)(1)$

19) $h(x) = 4x + 3$
Find $(h \circ h)(-7)$

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

21) $g(a) = 3a + 1$
$h(a) = -a^2 + 2$
Find $(g \circ h)(6)$

22) $g(a) = -3a + 2$
$f(a) = a^2 - 1 - 2a$
Find $(g \circ f)(7)$

23) $g(n) = n + 3$
$f(n) = n - 3$
Find $(g \circ f)(-10)$

24) $f(x) = 4x + 2$
$g(x) = 2x$
Find $(f \circ g)(5)$

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

26) $f(n) = n^2 - n$
$g(n) = n - 4$
Find $(f \circ g)(5)$

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

28) $f(x) = 2x^2 + x$
$g(x) = 2x$
Find $(f \circ g)(-4x)$

29) $f(n) = n^2 + 2$
$g(n) = -n - 1$
Find $(f \circ g)(3x)$

30) $f(n) = 3n + 3$
$g(n) = n - 4$
Find $(f \circ g)(4n)$