Math 2 Name_____

Unit 6.8 Functions Compositions

Period____

Perform the indicated operation.

1) $h(n) = n^2 + 2$
$g(n) = 3n - 5$
Find $h(g(-1))$

2) $g(n) = n^2 - 2n$
$f(n) = -3n - 3$
Find $(g \circ f)(0)$

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

4) $g(a) = 4a - 4$
$h(a) = a - 5$
Find $(g - 2h)(10)$

5) $f(x) = -x - 5$
$g(x) = 4x + 3$
Find $(2f + 3g)(-4)$

6) $h(n) = n^2 - 4$
$g(n) = 3n - 4$
Find $h(g(-1))$

7) $f(t) = 4t + 4$
$g(t) = 3t + 3$
Find $2f(-7) - 2g(-7)$

8) $g(x) = 2x - 5$
$h(x) = x^2 - 1$
Find $g(h(0))$

9) $g(n) = 3n$
$h(n) = 4n + 2$
Find $g(h(n))$

10) $h(x) = -x - 2$
Find $(h \circ h)(x)$

11) $g(x) = x^2 - 4x$
$h(x) = 2x - 3$
Find $(-5g + 3h)(x)$

12) $g(a) = 3a + 1$
$f(a) = 3a^2 - 2a$
Find $(3g + f)(a)$

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

14) $f(x) = x^3 - 1$
$g(x) = 3x$
Find $(5f - 2g)(x)$

15) $h(x) = 4x - 1$
$g(x) = x^2 + 2x$
Find $(5h + 4g)(x)$

16) $g(t) = t^2 - 1$
$h(t) = 4t + 1$
Find $g(h(t))$

17) $h(t) = 2t + 1$
$g(t) = -2t^2 - 4$
Find $2h(t) - 5g(t)$

18) $h(a) = 3a + 2$
$g(a) = 4a - 3$
Find $h(g(a))$

19) $h(x) = 3x + 3$
$g(x) = 4x + 3$
Find $(3h - 5g)\left(\frac{x}{2}\right)$

20) $h(x) = -3x - 2$
$g(x) = 3x - 1$
Find $h(g(-3x))$

21) $h(x) = x + 2$
Find $h\left(h\left(\frac{x}{4}\right)\right)$

22) $h(x) = 3x + 4$
$g(x) = x^2 + 1$
Find $(h \circ g)(x^2)$

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

24) $f(t) = -t + 4$
$g(t) = t^2 - 5$
Find $-2f(3t) + 3g(3t)$

25) $f(x) = 2x^2 + 4$
$g(x) = 4x - 1$
Find $(-3f - 4g)(-4x)$

26) $g(x) = -x + 4$
$f(x) = x^2 - 6x$
Find $-4g(-4x) - 2f(-4x)$

27) $g(n) = -2n + 4$
$f(n) = 3n + 3$
Find $g(n - 4) + 3f(n - 4)$

28) $g(n) = -3n - 1$
$f(n) = n^2 - 1$
Find $(g \circ f)(-3n)$