Name_____

Function Operations

Date_____ Period____

Perform the indicated operation.

1) $g(n) = n^2 + 4 + 2n$
$h(n) = -3n + 2$
Find $(g \cdot h)(1)$

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

3) $h(x) = 3x + 3$
$g(x) = -4x + 1$
Find $(h + g)(10)$

4) $g(a) = 3a + 2$
$f(a) = 2a - 4$
Find $\left(\frac{g}{f}\right)(3)$

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

6) $g(a) = 2a - 1$
$h(a) = 3a - 3$
Find $(g \cdot h)(-4)$

7) $g(t) = t^2 + 3$
$h(t) = 4t - 3$
Find $(g \cdot h)(-1)$

8) $g(n) = 3n + 2$
$f(n) = 2n^2 + 5$
Find $g(f(2))$

9) $g(x) = -x^2 - 1 - 2x$
$f(x) = x + 5$
Find $(g - f)(x)$

10) $f(x) = 3x - 1$
$g(x) = x^2 - x$
Find $\left(\frac{f}{g}\right)(x)$

11) $g(a) = -3a - 3$
$f(a) = a^2 + 5$
Find $(g - f)(a)$

12) $h(t) = 2t + 1$
$g(t) = 2t + 2$
Find $(h - g)(t)$

13) $f(x) = 2x^3 - 5x^2$
$g(x) = 2x - 1$
Find $(f \cdot g)(x)$

14) $h(n) = 4n + 5$
$g(n) = 3n + 4$
Find $(h - g)(n)$

15) $g(a) = -3a^2 - a$
$h(a) = -2a - 4$
Find $\left(\frac{g}{h}\right)(a)$

16) $f(n) = 2n$
$g(n) = -n - 4$
Find $(f \circ g)(n)$

17) $h(a) = 3a$
$g(a) = -a^3 - 3$
Find $\left(\frac{h}{g}\right)(a)$

18) $g(n) = 2n + 3$
$h(n) = n - 1$
Find $(g \circ h)(n)$

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

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

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

22) $g(a) = 2a + 2$
$h(a) = -2a - 5$
Find $(g \circ h)(-4 + a)$

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

24) $g(t) = 3t - 1$
$f(t) = 3t^3 + t$
Find $(3g + 3f)(4t)$

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

26) $f(t) = t - 4$
$g(t) = t^3 - 3$
Find $(f \cdot g)(-2 - t)$

27) $g(t) = t^3 - 3t^2$
$f(t) = -t - 4$
Find $g(-2t) - f(-2t)$

28) $f(x) = 2x + 2$
$g(x) = -3x - 1$
Find $\left(\frac{f}{g}\right)(-4x)$

29) $f(x) = -x - 4$
$g(x) = 2x^2 - 2$
Find $f(-2x) - g(-2x)$

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

Name_____

Function Operations

Date_____ Period____

Perform the indicated operation.

1) $g(n) = n^2 + 4 + 2n$
$h(n) = -3n + 2$
Find $(g \cdot h)(1)$

-7

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

-59

3) $h(x) = 3x + 3$
$g(x) = -4x + 1$
Find $(h + g)(10)$

-6

4) $g(a) = 3a + 2$
$f(a) = 2a - 4$
Find $\left(\frac{g}{f}\right)(3)$

$\frac{11}{2}$

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

-16

6) $g(a) = 2a - 1$
$h(a) = 3a - 3$
Find $(g \cdot h)(-4)$

135

7) $g(t) = t^2 + 3$
$h(t) = 4t - 3$
Find $(g \cdot h)(-1)$

-28

8) $g(n) = 3n + 2$
$f(n) = 2n^2 + 5$
Find $g(f(2))$

41

9) $g(x) = -x^2 - 1 - 2x$
$f(x) = x + 5$
Find $(g - f)(x)$

$-x^2 - 3x - 6$

10) $f(x) = 3x - 1$
$g(x) = x^2 - x$
Find $\left(\frac{f}{g}\right)(x)$

$\frac{3x - 1}{x^2 - x}$

11) $g(a) = -3a - 3$
$f(a) = a^2 + 5$
Find $(g - f)(a)$

$-a^2 - 3a - 8$

12) $h(t) = 2t + 1$
$g(t) = 2t + 2$
Find $(h - g)(t)$

-1

13) $f(x) = 2x^3 - 5x^2$
$g(x) = 2x - 1$
Find $(f \cdot g)(x)$

$4x^4 - 12x^3 + 5x^2$

14) $h(n) = 4n + 5$
$g(n) = 3n + 4$
Find $(h - g)(n)$

$n + 1$

15) $g(a) = -3a^2 - a$
$h(a) = -2a - 4$
Find $\left(\frac{g}{h}\right)(a)$

$\frac{-3a^2 - a}{-2a - 4}$

16) $f(n) = 2n$
$g(n) = -n - 4$
Find $(f \circ g)(n)$

$-2n - 8$

17) $h(a) = 3a$
$g(a) = -a^3 - 3$
Find $\left(\frac{h}{g}\right)(a)$

$\frac{3a}{-a^3 - 3}$

18) $g(n) = 2n + 3$
$h(n) = n - 1$
Find $(g \circ h)(n)$

$2n + 1$

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

$16x^2 + 8x - 1$

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

$-t^2 + 2t + 10$

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

$2x^2 - 2x - 6$

22) $g(a) = 2a + 2$
$h(a) = -2a - 5$
Find $(g \circ h)(-4 + a)$

$-4a + 8$

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

$192x^2 + 80x - 12$

24) $g(t) = 3t - 1$
$f(t) = 3t^3 + t$
Find $(3g + 3f)(4t)$

$192t^3 + 40t - 3$

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

$-3x^3 - 6x + 13$

26) $f(t) = t - 4$
$g(t) = t^3 - 3$
Find $(f \cdot g)(-2 - t)$

$t^4 + 12t^3 + 48t^2 + 83t + 66$

27) $g(t) = t^3 - 3t^2$
$f(t) = -t - 4$
Find $g(-2t) - f(-2t)$

$-8t^3 - 12t^2 - 2t + 4$

28) $f(x) = 2x + 2$
$g(x) = -3x - 1$
Find $\left(\frac{f}{g}\right)(-4x)$

$\frac{-8x + 2}{12x - 1}$

29) $f(x) = -x - 4$
$g(x) = 2x^2 - 2$
Find $f(-2x) - g(-2x)$

$-8x^2 + 2x - 2$

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

$y^2 - 11y + 17$