Kuta Software - Infinite Algebra 2   Name_____

Function Operations   Date_____ Period____

Perform the indicated operation.

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

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 $\left(\dfrac{g}{f}\right)(3)$

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 $\left(\dfrac{f}{g}\right)(x)$

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 $\left(\dfrac{g}{h}\right)(a)$

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

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

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 $(g \circ h)(-4 + a)$

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 $\left(\dfrac{g}{f}\right)(3)$

   $\dfrac{11}{2}$

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 $\left(\dfrac{f}{g}\right)(x)$

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

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 $\left(\dfrac{g}{h}\right)(a)$

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

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 $\left(\dfrac{h}{g}\right)(a)$

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

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 $(g \circ h)(-4 + a)$

    $-4a + 8$

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