Math 2 Name_____

Unit 6.7 Functions Operations

Period____

Perform the indicated operation.

1) $g(n) = 4n - 3$
$h(n) = 4n + 3$
Find $(g - h)(8)$

-6

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

8

3) $h(x) = -3x + 3$
$g(x) = -x - 5$
Find $h(-9) - g(-9)$

26

4) $g(x) = 3x - 1$
$h(x) = 3x - 3$
Find $g(-6) + h(-6)$

-40

5) $g(t) = t - 5$
$h(t) = 3t - 5$
Find $(g \cdot h)(3)$

-8

6) $g(a) = 3a - 3$
$h(a) = 2a + 5$
Find $\left(\frac{g}{h}\right)(5)$

$\frac{4}{5}$

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

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8) $g(n) = n + 1$
$f(n) = -n + 2$
Find $g(0) \div f(0)$

$\frac{1}{2}$

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

$n^3 - 3n - 3$

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

$-6t^3 + 8t^2 + 15t - 20$

11) $h(x) = x + 3$
$g(x) = 3x - 3$
Find $\left(\frac{h}{g}\right)(x)$

$\frac{x + 3}{3x - 3}$

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

$a^3 - a^2 + 2a - 2$

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

$x - 1$

14) $f(x) = 2x - 2$
$g(x) = 4x - 3$
Find $f(x) \div g(x)$

$\frac{2x - 2}{4x - 3}$

15) $f(a) = -3a - 5$
$g(a) = a^2 - 4a$
Find $\left(\frac{f}{g}\right)(a)$

$\frac{-3a - 5}{a^2 - 4a}$

16) $f(x) = x^2 + 4$
$g(x) = 4x + 4$
Find $f(x) \div g(x)$

$\frac{x^2 + 4}{4x + 4}$

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

$x^2 - x - 4$

18) $g(n) = n^3 - 1$
$f(n) = 3n - 3$
Find $g(n) - f(n)$

$n^3 - 3n + 2$

19) $f(n) = 4n + 4$
$g(n) = 4n - 1$
Find $\left(\frac{f}{g}\right)(n - 3)$

$\frac{4n - 8}{4n - 13}$

20) $g(a) = -3a + 4$
$h(a) = 4a - 1$
Find $g(a^2) \div h(a^2)$

$\frac{-3a^2 + 4}{4a^2 - 1}$

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

$\frac{1}{27}x^3 + \frac{5}{3}x - 5$

22) $h(x) = x - 2$
$g(x) = 2x - 1$
Find $h(x^2) \cdot g(x^2)$

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

23) $g(a) = -2a - 2$
$h(a) = 2a + 1$
Find $(g \cdot h)(3a)$

$-36a^2 - 18a - 2$

24) $g(t) = -2t^2 + 4t$
$h(t) = -2t$
Find $g(2n) + h(2n)$

$-8n^2 + 4n$

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

$-2n^2 - 8$

26) $f(n) = 4n + 5$
$g(n) = 4n + 4$
Find $f(4n) \div g(4n)$

$\frac{16n + 5}{16n + 4}$

27) $h(x) = 2x^2 + 4x$
$g(x) = 3x + 4$
Find $h\left(\frac{x}{3}\right) + g\left(\frac{x}{3}\right)$

$\frac{2}{9}x^2 + \frac{7}{3}x + 4$

28) $g(n) = -n^3 + 5$
$h(n) = 2n - 1$
Find $(g - h)(4n)$

$-64n^3 - 8n + 6$