Pre Calc   Name_____

Operating with Functions

Date_____ Period_____

Perform the indicated operations and simplify using only positive exponents (as needed).

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

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

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

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

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

6) $h(x) = x + 2$
$g(x) = x^2 - 5x$
Find $h(x) \cdot g(x)$

7) $h(x) = 8x^3$
$g(x) = 24x^4 + 32x^3 + 5x^2$
Find $\dfrac{g(x)}{h(x)}$

8) $f(x) = 20x^3 + 12x^2 + 4x$
$g(x) = 4x^3$
Find $\dfrac{f(x)}{g(x)}$

9) $h(x) = 5v^3 + 5v^2 + 40v$
$g(x) = 10v^3$
Find $\dfrac{h(x)}{g(x)}$

10) $g(a) = a + 5$
$f(a) = a^2 + 4a$
Find $g(4x) \cdot f(4x)$

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

12) $f(x) = 3x + 4$
$g(x) = x^3 + 5x^2$
Find $f(2x) \cdot g(2x)$

13) $g(n) = 3n - 5$
$h(n) = 4n + 3$
Find $g\left(\dfrac{n}{3}\right) \div h\left(\dfrac{n}{3}\right)$

14) $f(n) = -4n - 4$
$g(n) = n^3 + 4$
Find $f(n^2) \cdot g(n^2)$

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

16) $h(x) = 3x$
$g(x) = 4x - 3$
Find $h(x - 3) - g(x - 3)$