Algebra 2 Name_____

Composition of Functions

Perform the indicated operation. Choose your level: Easy = # 1-6, 8, 9, 11, 12, 14, 16
Medium = # 3-6, 7, 10, 11, 12, 16, 17, 18, 20 Difficult = #4-6, 13, 15, 17-22

1) $h(a) = 2a - 4$
$g(a) = 4a + 1$
Find $h(g(5))$

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

3) $f(x) = 2x - 4$
$g(x) = 3x - 2$
Find $f(g(8))$

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

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

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

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

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

9) $f(t) = -2t + 2$
$g(t) = 4t + 1$
Find $f(g(t))$

10) $f(x) = 3x^2 + 1 + 2x$
$g(x) = 3x + 5$
Find $f(g(x))$

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

12) $g(n) = 3n$
$f(n) = n^3 + 1$
Find $g(f(n))$

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

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

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

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

17) $f(a) = a + 1$
$g(a) = 2a + 2$
Find $f(g(2a))$

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

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

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

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

22) $f(a) = 4a - 1$
$g(a) = a + 3$
Find $f(g(a^2))$