Act. #59

Composition of Functions

Perform the indicated operation.

1) $f(x) = 4x + 5$
Find $f(f(-1))$

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

3) $g(n) = n + 1$
$f(n) = n^2 - n$
Find $g(f(8))$

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

5) $g(n) = 4n - 5$
$h(n) = 2n + 1$
Find $g(h(8))$

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

7) $h(a) = -2a^3 + 3a$
$g(a) = a - 3$
Find $h(g(-1))$

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

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

10) $f(a) = 2a + 5$
$g(a) = a^2 - 4$
Find $f(g(a))$

11) $g(n) = 4n$
$f(n) = 4n + 2$
Find $g(f(n))$

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