

**Algebra II – Day 16**  
**Composite 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  $f(g(a))$