

## SM3-A HW #6-1 (Composition of Functions)

Date \_\_\_\_\_ Period \_\_\_\_\_

**Evaluate each function.**

1)  $h(n) = n^2 - 2$ ; Find  $h(-10)$

2)  $k(a) = |a + 2|$ ; Find  $k(0)$

3)  $w(x) = -2x - 2$ ; Find  $w(x^2)$

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

5) For the following two functions, find  $f(g(x))$

$f(x) = 2x - 2$

$g(x) = x - 2$

6) For the following two functions, find  $f(g(x))$

$f(x) = x + 3$

$g(x) = x^2 - 1$

**Perform the indicated operation.**

7)  $g(x) = x^2 - 5x$   
 $h(x) = 4x - 4$   
Find  $(g \circ h)(x)$

8)  $f(x) = x - 3$   
Find  $(f \circ f)(x)$

9)  $h(n) = 2n - 5$   
 $g(n) = -2n^3 - 2n$   
Find  $(h \circ g)(n)$

10)  $h(n) = n - 4$   
 $g(n) = n^2 - 2n$   
Find  $(h \circ g)(-9)$

11)  $g(a) = a - 2$   
 $h(a) = -2a^2 - 1$   
Find  $(g \circ h)(2)$

12)  $g(n) = n^2 - 3 - n$   
 $h(n) = n - 3$   
Find  $(g \circ h)(4)$

**a) Factor each trinomial (provide the intercept form of the equation).****b) Determine the "zeroes" of the equation (remember the Zero Product Property!)**

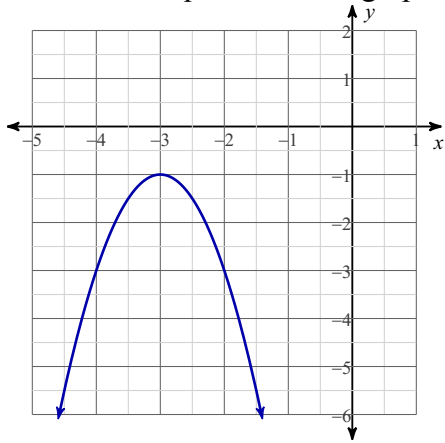
13)  $p^2 + 4p = 0$

14)  $n^2 - 3n - 18 = 0$

15)  $2x^2 - x - 21 = 0$

16)  $6k^2 + 12k - 18 = 0$

17) What is the equation of the graph?



18) What is the equation of the graph?

