

## Variables in Quadratic Functions

Name: \_\_\_\_\_

All of the functions below are of the form  $n(x) = ax^2 + bx + c$ , where  $n$  could be either  $f$ ,  $g$ ,  $h$ , or  $j$  (the names of the functions). Use what you know about solving equations in 3 variables and functions to fill in the blanks about the following functions.

1.)  $f(x) = ax^2 + bx + c$ :  $f(-1) = 10$ ,  $f(1) = 4$ ,  $f(2) = 7$

$a =$  \_\_\_\_\_       $b =$  \_\_\_\_\_       $c =$  \_\_\_\_\_

$f(x) =$  \_\_\_\_\_ (rewrite using numbers rather than  $a, b, c$ )

$f(3) =$  \_\_\_\_\_

2.)  $g(x) = ax^2 + bx + c$ :  $g(-1) = -2$ ,  $g(-2) = -6$ ,  $g(3) = -6$

$a =$  \_\_\_\_\_       $b =$  \_\_\_\_\_       $c =$  \_\_\_\_\_

$g(x) =$  \_\_\_\_\_ (rewrite using numbers rather than  $a, b, c$ )

$g(-3) =$  \_\_\_\_\_

3.)  $h(x) = ax^2 + bx + c$ :  $h(1) = 9$ ,  $h(-2) = 6$ ,  $h(4) = 12$

$a =$  \_\_\_\_\_       $b =$  \_\_\_\_\_       $c =$  \_\_\_\_\_

$h(x) =$  \_\_\_\_\_ (rewrite using numbers rather than  $a, b, c$ )

$h(-1) =$  \_\_\_\_\_

4.)  $j(x) = ax^2 + bx + c$ :  $j(0) = -4$ ,  $j(1) = 1$ ,  $j(2) = 10$

$a =$  \_\_\_\_\_       $b =$  \_\_\_\_\_       $c =$  \_\_\_\_\_

$j(x) =$  \_\_\_\_\_ (rewrite using numbers rather than  $a, b, c$ )

$j(0) =$  \_\_\_\_\_

5.) Which of the above functions is not a quadratic function, and why?