Name_____ Date_____ Per_____

Function Operations and Notation

Function Operations

If $f(x) = 2x + 5, g(x) = 2x^2 - 3x, h(x) = 4x$, **find the following:**

Problem	$f(x) + g(x)$	$h(x) - f(x)$	$[f(x)]^2$
Work			
Answer			

Function Notation

$f(x)$	• $f(x) = g(x) = h(x)$ • you can use any letter except that which is used as a variable • same as $y =$ • $f(x) = 5x + 3$ is the same as $y = 5x + 3$	Rewrite $y = 2x^2 - 5x + 3$ in function notation three different ways. _____ _____ _____
$f(\#)$	Substitute given # into each x in function/equation	If $f(x) = 2x - 5$, what is $f(3)$? Write $f(3)$ Simplify Expression $f(3) =$

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Example 1: Evaluate $f(x) = 4x - 7$ over the domain of f, $\{1,2,3,4\}$. What is the range of f?

$f(\quad)$	$f(\quad)$	$f(\quad)$	$f(\quad)$	The range of f

Example 2: Evaluate $g(x) = 3^x + 1$ over the domain of g, $\{0,1,2,3\}$. What is the range of g?

$g(\quad)$	$g(\quad)$	$g(\quad)$	$g(\quad)$	The range of g

Example 3:

Raven started an online petition calling for more vegan options in the school cafeteria. So far, the number of signatures has doubled every day. She started with 32 signatures on the first day. Raven's petition can be modeled by the exponential function $f(x) = 32(2)^x$. Evaluate $f(3)$ and interpret the results in terms of the petition.

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