

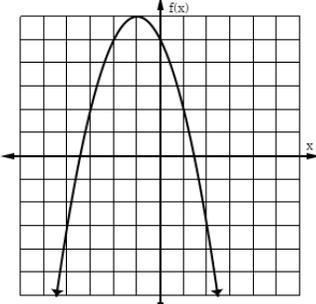
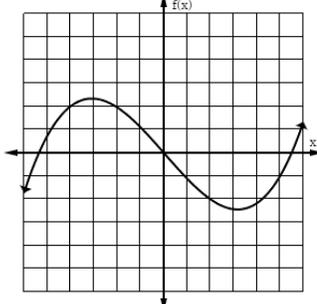
Name:

Date:

Topic:

Class:

Main Ideas/Questions	Notes/Examples								
FUNCTION NOTATION	<p>Equations that represent functions are often written in function notation.</p> <p>$y = 4x - 1$ \rightarrow </p> <ul style="list-style-type: none">• this is read as _____• _____ is the _____ and _____ is the _____								
EVALUATING <i>Functions</i>	<p>Function notation is especially useful for finding a value in the range that corresponds to a certain domain value.</p> <p>Example: If $f(x) = 4x - 1$, find $f(-7)$.</p>								
EXAMPLES	<p>Evaluate each function for the given value.</p> <table border="1" data-bbox="451 1010 1524 2007"><tbody><tr><td data-bbox="451 1010 989 1262">1. $f(x) = x + 7; f(5)$</td><td data-bbox="989 1010 1524 1262">2. $g(x) = 3x - 8; g(-3)$</td></tr><tr><td data-bbox="451 1262 989 1514">3. $h(x) = \frac{2}{3}x - 1; h(9)$</td><td data-bbox="989 1262 1524 1514">4. $f(x) = x^2 - x; f(-4)$</td></tr><tr><td data-bbox="451 1514 989 1766">5. $f(x) = -x^2 + 6x - 4; f(5)$</td><td data-bbox="989 1514 1524 1766">6. $g(x) = -\frac{1}{2}x + 9; g(-8)$</td></tr><tr><td data-bbox="451 1766 989 2007">7. $f(x) = 2x^2 + 4x - 9; f(-5)$</td><td data-bbox="989 1766 1524 2007">8. $g(x) = x - x^2 ; g(-7)$</td></tr></tbody></table>	1. $f(x) = x + 7; f(5)$	2. $g(x) = 3x - 8; g(-3)$	3. $h(x) = \frac{2}{3}x - 1; h(9)$	4. $f(x) = x^2 - x; f(-4)$	5. $f(x) = -x^2 + 6x - 4; f(5)$	6. $g(x) = -\frac{1}{2}x + 9; g(-8)$	7. $f(x) = 2x^2 + 4x - 9; f(-5)$	8. $g(x) = x - x^2 ; g(-7)$
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7. $f(x) = 2x^2 + 4x - 9; f(-5)$	8. $g(x) = x - x^2 ; g(-7)$								

	9. $f(x) = 4x + 11$; $f(c + 7)$	10. $h(x) = -9 - x$; $h(2k - 5)$		
<div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: auto;"> $f(x) = 8 - 3x$ $g(x) = x^2 + 2x$ $h(x) = -\frac{5}{2}x - 1$ </div>	For questions 11-16, use the functions to the left.			
	11. $f(4) + 9$	12. $-2 \cdot g(-5)$		
	13. $g(4) + g(-1)$	14. $3 \cdot h(2) - f(-9)$		
	15. If $f(x) = -13$, find x .	16. If $h(x) = 39$, find x .		
<h2>APPLICATION</h2>	17. Anthropologists use the length of certain bones of the human skeleton to estimate the height of the living person. One of these bones is the femur. To estimate the height in centimeters of a female with a femur length of x , the function $h(x) = 61.41 + 2.32x$ can be used. Find $h(46)$ and explain its meaning.			
<h2>EVALUATING</h2> <p><i>given a graph</i></p>	Given the graph of $f(x)$, find each function value.			
	18. 	19. 		
	a) $f(-3)$	c) $f(0)$	a) $f(-4)$	c) $f(2)$
	b) $f(1)$	d) $f(2)$	b) $f(0)$	d) $f(5)$

Name: _____

Unit 3: Relations and Functions

Date: _____ Per: _____

Homework 4: Function Notation
& Evaluating Functions



**** This is a 2-page document! ****

If $f(x) = -3x - 2$, find each value.

1. $f(3)$

2. $f(-7)$

3. $f(-2) + 9$

If $h(x) = x^2 - 5x + 7$, find each value.

4. $h(2)$

5. $h(-5)$

6. $\frac{1}{3} \cdot h(-8)$

If $g(x) = 1 - \frac{3}{4}x$, find each value.

7. $g(-12)$

8. $g(0)$

9. $-5 \cdot g(4) - 1$

If $h(x) = |1 - 7x|$, find each value.

10. $h(1)$

11. $h(-7)$

12. $23 - h(9)$

If $f(x) = 8 - 5x$, find each value.

13. $f(4c)$

14. $f(2 - k)$

15. $f(4p + 3)$

For questions 16-19, use the functions $f(x) = -x^2 + 8x - 11$, $g(x) = 14 - \frac{2}{3}x$, and $h(x) = -x - 7$ to find each function value.

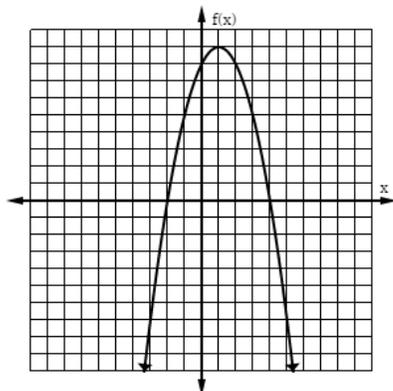
16. $f(-4) - f(1)$	17. $g(9) + h(-14)$
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18. $h(8) - 2 \cdot f(3)$	19. $\frac{1}{2}g(-6) + f(-2)$
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20. Given $f(x) = 2x + 9$, if $f(x) = 15$, find x .	21. Given $h(x) = -x - 14$, if $h(x) = -2$, find x .
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22. Given $p(x) = \frac{x+7}{3}$, if $p(x) = 13$, find x .	23. Given $g(x) = -\frac{3}{2}x - 9$, if $g(x) = -48$, find x .
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For questions 24-27, use the graph below.



24. Find $f(-1)$.
25. Find $f(4)$.
26. Find $f(-3)$.
27. If $f(x) = 9$, find x .