

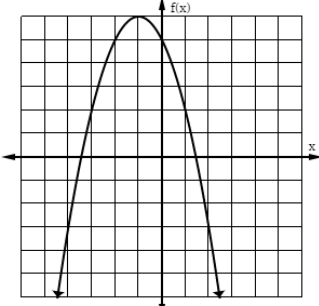
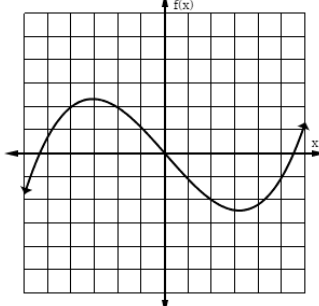
Name:

Date:

Topic:

Class:

Main Ideas/Questions	Notes/Examples								
<b>FUNCTION NOTATION</b>	<p>Equations that represent functions are often written in <b>function notation</b>.</p> <p><math>y = 4x - 1</math> <math>\rightarrow</math> <input type="text"/></p> <ul style="list-style-type: none"><li>• this is read as _____</li><li>• _____ is the _____ and _____ is the _____</li></ul>								
<b>EVALUATING</b> <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><b>Example:</b> If <math>f(x) = 4x - 1</math>, find <math>f(-7)</math>.</p>								
<b>EXAMPLES</b>	<p><b>Evaluate each function for the given value.</b></p> <table border="1"><tbody><tr><td data-bbox="451 1010 987 1262">1. <math>f(x) = x + 7; f(5)</math></td><td data-bbox="987 1010 1526 1262">2. <math>g(x) = 3x - 8; g(-3)</math></td></tr><tr><td data-bbox="451 1262 987 1514">3. <math>h(x) = \frac{2}{3}x - 1; h(9)</math></td><td data-bbox="987 1262 1526 1514">4. <math>f(x) = x^2 - x; f(-4)</math></td></tr><tr><td data-bbox="451 1514 987 1766">5. <math>f(x) = -x^2 + 6x - 4; f(5)</math></td><td data-bbox="987 1514 1526 1766">6. <math>g(x) = -\frac{1}{2}x + 9; g(-8)</math></td></tr><tr><td data-bbox="451 1766 987 2003">7. <math>f(x) = 2x^2 + 4x - 9; f(-5)</math></td><td data-bbox="987 1766 1526 2003">8. <math>g(x) =  x - x^2 ; g(-7)</math></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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	<b>9.</b> $f(x) = 4x + 11$ ; $f(c + 7)$	<b>10.</b> $h(x) = -9 - x$ ; $h(2k - 5)$		
<div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: auto;"> <math display="block">f(x) = 8 - 3x</math> <math display="block">g(x) = x^2 + 2x</math> <math display="block">h(x) = -\frac{5}{2}x - 1</math> </div>	<b>For questions 11-16, use the functions to the left.</b>			
	<b>11.</b> $f(4) + 9$	<b>12.</b> $-2 \cdot g(-5)$		
	<b>13.</b> $g(4) + g(-1)$	<b>14.</b> $3 \cdot h(2) - f(-9)$		
	<b>15.</b> If $f(x) = -13$ , find $x$ .	<b>16.</b> If $h(x) = 39$ , find $x$ .		
<h2>APPLICATION</h2>	<b>17.</b> 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>	<b>Given the graph of <math>f(x)</math>, find each function value.</b>			
	<b>18.</b> 	<b>19.</b> 		
	<b>a)</b> $f(-3)$	<b>c)</b> $f(0)$	<b>a)</b> $f(-4)$	<b>c)</b> $f(2)$
	<b>b)</b> $f(1)$	<b>d)</b> $f(2)$	<b>b)</b> $f(0)$	<b>d)</b> $f(5)$