Optional Review for Quest #8 – Functions

Name: _____ Class: _____

Consider the relation $f(x) = x^2 - 4x + 3$.

1.) Find $f(5)$

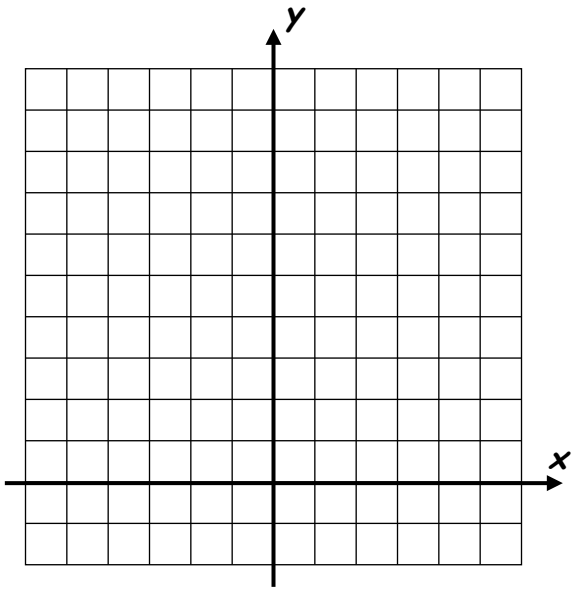
2.) Find $f(-7)$

3.) Find $f(2a)$

4.) Find $f(3x - 4)$

5.) Graph the function using the table of values below.

x	$x^2 - 6x + 3$	(x, y)
-1		
0		
1		
2		
3		
4		
5		



6.) Find the average rate of change from x = 2 to x = 5.

7.) Determine if the relation is a function. Explain your reasoning.

8.) Determine the range of the function.

The table to the side shows the average yearly balance of a savings account where interest is compounded annually. The balance in dollars, $b(t)$, is a function of the time in years, t.

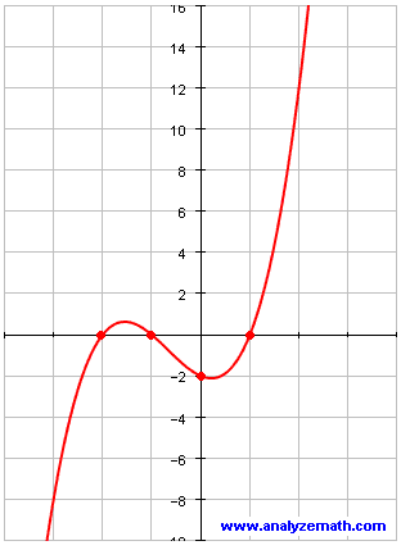
Year	Balance, in Dollars
0	380.00
10	562.49
20	832.63
30	1232.49
40	1824.39
50	2700.54

9.) Find $f(30)$ and interpret this value.

10.) Find t when $f(t) = 1824.39$ and interpret this value.

11.) Find the average rate of change from 10 years to 40 years. Interpret this value.

Consider the function $h(x)$ to the side.



12.) Explain why this is a function.

13.) Find the following values.

$f(-3) =$ $f(2) =$

14.) Find all values of x for which $f(x) = 0$.

15.) Find the domain and range of the function.

16.) Find the intervals over which the graph is increasing.

17.) Find the intervals over which the graph is decreasing.

18.) Find the *approximate* coordinates of the **relative** minimum and the **relative** maximum of the graph (turning points).