AP Calculus Chapter 1 Pretest/review Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please read each question thoroughly. Please circle or box your final answer.

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| --- | --- |
| 1. Find the domain, range, and the **exact** x intercepts of the function. Note: the intent is that you perform transformation on the parent function to give precise answers for this problem. | |
| 1. Given , find the domain of the function and its asymptotes. | 1. In the function what is the value of , if ? [show your work] |
| 1. If , find . | 1. Given determine . |
| 1. Use the table to evaluate the expression  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | 1 | 2 | 3 | 4 | 5 | 6 | |  | 3 | 2 | 1 | 0 | 1 | 2 | |  | 6 | 5 | 2 | 3 | 4 | 6 | | 1. Starting with the graph of , find the equation of the graph that results from reflecting about the line *y* = 5.   Select the correct answer. |
| 1. The function is a composition of two functions and . What are these two functions? | 1. Given , find the domain of the function and its asymptotes. |

1. The following is a graph of



On the same axis graph the following transformations:

1.  b.
2. Find the formula that describes the following function.



1. Let be a one to one function whose *inverse* function is given by the formula



1. Compute and
2. What is the value of such that
3. What is the value of such that
4. To the right is a graph of

Draw an approximate graph of

|  |  |
| --- | --- |
| 1. Use long division (we will not give you that hint on the test) to find the vertical and slant asymptote of the function and sketch a graph WITHOUT using your calculator. Be as accurate AND NEAT as you can on your **graph paper**. | 1. Sketch a neat and accurate graph, **on graph paper**, of the polynomial WITHOUT using your calculator. (Hint: Factor, factor. This hint will NOT be given on the test). |

1. Simplify and sketch the following function as accurately as possible WITHOUT using your graphing calculator: