Free Response Practice #28
Calculator NOT Permitted

Pictured below is a table of values that represents the graph of an exponential function, $G(x) = a(b)^x + c$. Use the table to answer the questions below.

x	–9	–5	–1	1	3	5	9
$G(x)$	–510	–30	0	1.5	1.875	1.969	1.998

a. Describe the behavior of $G(x)$ as $x \to -\infty$ and as $x \to \infty$ using the words increasing, decreasing, bounded or unbounded.

b. Does $G(x)$ represent an exponential growth or decay? Give a reason for your answer.

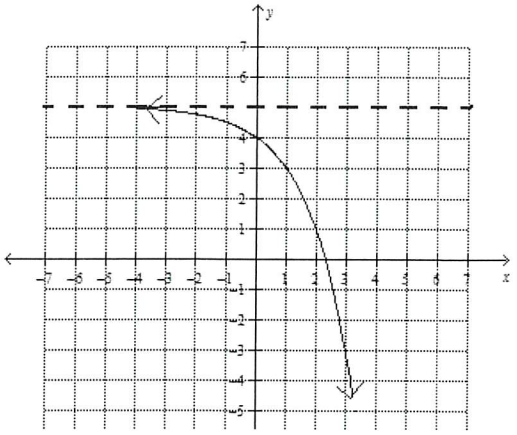
c. What is the value of c? Explain your reasoning.

d. What can be concluded about the value of a? Explain your reasoning.

e. State the domain and range of $G(x)$.

Free Response Practice #29
Calculator NOT Permitted

The graph of an exponential function, $g(x) = a(b)^x + c$, is pictured to the right Use the graph to answer the following questions.



a. Describe the behavior of $g(x)$ as $x \to -\infty$ and as $x \to \infty$.

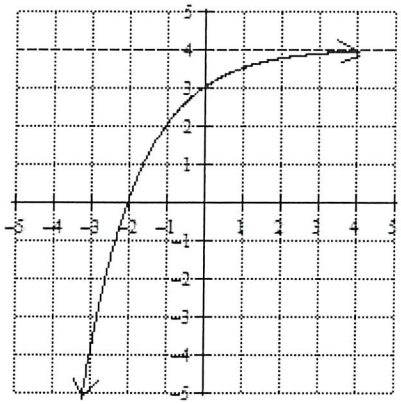
b. Is $g(x)$ an exponential growth or decay? Explain your reasoning.

c. What is the value of c? Explain your reasoning.

d. What can be concluded about the value of a? Explain your reasoning.

e. What can be concluded about the value of b? Explain your reasoning.

Free Response Practice #30
Calculator NOT Permitted



The graph of an exponential function, $g(x) = a \cdot b^{-x+1} + c$, shown above is such that $g(1) = 3.5$. Use the graph to answer the questions that follow.

a. Determine if $g(x)$ is a growth or a decay function. Give a reason for your answer.

b. Describe the behavior of $g(x)$ as $x \to -\infty$ and as $x \to \infty$ using the words increasing, decreasing, with bound and/or without bound.

c. Find the values of a, b, and c and write the equation of $g(x)$.

d. Based on your equation found in part c), do the values of a and b analytically support your response in part a)? Explain your reasoning.