1. [9 points] Consider the table of known values for the functions $f(x)$ and $h(x)$, where $f(x)$ is invertible.

<table>
<thead>
<tr>
<th>$x$</th>
<th>$-4$</th>
<th>$-2$</th>
<th>$-1$</th>
<th>$0$</th>
<th>$1$</th>
<th>$2$</th>
<th>$4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$f(x)$</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>$-2$</td>
<td>$-1$</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>$h(x)$</td>
<td>?</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>?</td>
<td>7</td>
</tr>
</tbody>
</table>

a. [4 points] Find each of the following, or write N/A if a value does not exist or there is not enough information to find it.

(i) $f^{-1}(0)$

Answer: $f^{-1}(0) =$ ____________

(ii) $f(h(0))$

Answer: $f(h(0)) =$ ____________

(iii) $h(g(1))$, where $g(x) = \log(x)$

Answer: $h(g(1)) =$ ____________

(iv) $k(1)$, where $k(x) = -4f(2(x + 1)) - 6$

Answer: $k(1) =$ ____________

b. [2 points] If $f(h(2)) = 0$, then what is $h(2)$?

Answer: $h(2) =$ ____________

c. [3 points] Give a value for $h(-4)$ that would guarantee that $h(x)$ is not invertible and explain (in at most 1 sentence) why your value for $h(-4)$ forces the function to be non-invertible.

Answer: $h(-4) =$ ____________

Explanation:

2. [4 points] Use the graph of $y = 10^x$ below to decide whether each of the following statements is true (T), false (F), or there is not enough information to tell (NEI).

(i) $a < 1$ T F NEI

(ii) $b < -1$ T F NEI

(iii) $\log(12) = a$ T F NEI

(iv) $\log(b) = 0.02$ T F NEI