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

x	-4	-2	-1	0	1	2	4
$f(x)$	2	3	0	-2	-1	4	5
$h(x)$	?	2	1	4	0	?	7

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

(ii) $f(h(0))$ **Answer:** $f(h(0)) =$ **5**

(iii) $h(g(1))$, where $g(x) = \log(x)$
Answer: $h(g(1)) =$ **4**

(iv) $k(1)$, where $k(x) = -4f(2(x+1)) - 6$
Answer: $k(1) =$ -26

b. [2 points] If $f(h(2)) = 0$, then what is $h(2)$?
Answer: $h(2) =$ -1

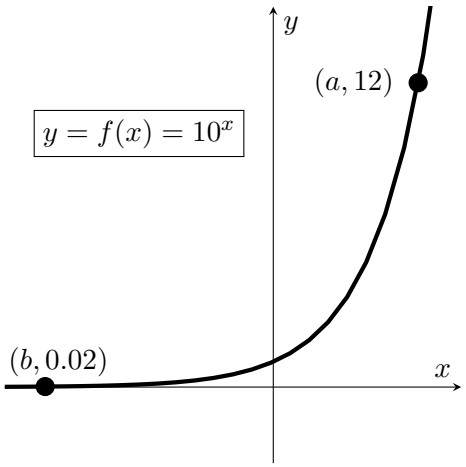
c. [3 points] Give a value for $h(-4)$ that would guarantee that $h(x)$ is *not* invertible and explain (in at most 1 sentence) why your value for $h(-4)$ forces the function to be non-invertible.

Answer: $h(-4) =$ **7 (or any of: 2, 1, 4, 0)**

Explanation:

Solution: If $h(-4) = 7 = h(4)$, then we have two inputs of h with the same output.

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