

1. [9 points] The function $h(r)$ is **even** and **periodic** with period 6. Some values of $h(r)$ are given in the table below.

r	-2	0	1	3
$h(r)$	1.5	1	0	-1

The function $f(x)$ is given by $f(x) = \log(3x)$.

- a. [5 points] Evaluate each of the following using information you know about $h(r)$; or if there is not enough information to do so, write NEI. *Write your answer in exact form, or rounded to two decimal places. Where relevant, show all work.*

(i.) $h(2) =$ _____

(ii.) $h(h(0)) =$ _____

(iii.) $h(10) =$ _____

(iv.) $f^{-1}(h(-2)) =$ _____

- b. [2 points] Is $h(t)$ invertible? Explain why it definitely is, why it definitely isn't, or if there isn't enough information to tell.

- c. [2 points] Without using a calculator, Laurel claims that $f(33)$ is approximately 2. Explain how she could have known this!