

Quiz 3

Math 344

Week Three

- Write your name here: _____.
- Answer all questions.
- Proofs are graded for clarity, rigor, neatness, and style.
- Good luck!

1. Let

$$H = \{n \in \mathbb{Z} \mid n \geq 0\}.$$

Prove that H is a subgroup of $\mathbb{Z}$ or prove that H is not a subgroup of $\mathbb{Z}$.

Proof. To see that H is not a subgroup of $\mathbb{Z}$, we note that while $1 \in H$, it is not the case that the (additive) inverse of one—aka -1—is in H . $\square$