

# CMPS 6100 Lab 03

## Answers

Name: \_\_\_\_\_

Place all written answers from `lab-03.md` here.

## Asymptotic Analysis Problems

1.  $32n \in O(n)$
2.  $\ln n \in \Omega(n)$
3.  $\lg n \in \Theta(\ln n)$
4.  $\log_c n \in \Theta(\ln n), \quad c > 1$
5.  $n^2 \in O(2^n)$
6.  $n^3 \in \Omega(n^2)$
7.  $4^{\lg n} \in \Theta(n)$
8.  $\ln^2 n \in O(n)$
9.  $\ln^2 n \in O(\sqrt{n})$
10.  $\ln^c n \in O(n^k), \quad \forall c, k > 0$
11.  $\ln \ln n \in O(\ln n)$
12.  $2^n \in \Omega(2^{n+1})$

## The Game

Detail any and additional features that you added to the game here.

13. Add the text file for your custom map and a drawn image of it to your repository. Note the names of these files here.
14. Document any additional bonus features you added to the game here.