

# MTH 4320 Homework 1

Yaohui Wu

February 1, 2024  
Due by February 7, 2024

## Contents

1	Problem 1	1
2	Problem 2	1
3	Problem 3	1
4	Problem 4	1

## 1 Problem 1

*Solution.* We have a triple nested loop and for the outermost loop we run  $n - 1$  operations then we run  $n - 1$  operations in the inner loop for every operation in the outer loop and so on. The running time is  $(n - 1)(n - 1)(n - 1) = O(n^3)$ . ■

## 2 Problem 2

*Solution.* ■

## 3 Problem 3

*Solution.* ■

## 4 Problem 4

*Solution.* ■