

# MTH 4300: Algorithms, Computers, and Programming II

## HW #1

Due Date: February 12th, 2025

### 1

Write code that calculates  $\max\{a,b\}$  and stores the result in the variable `m`.

### 2

Write a code that checks whether the real number `x` belongs to the union of the open intervals  $(5 - 15) \cup (95 - 202)$ . If it does, the program should print `yes`. If it does not, the program should print `no`.

### 3

Assume that the user is asked to provide an integer `x` through the standard input. The program will check whether `x` is bigger than 100. If it is, then the program will print: "Congratulations! You know about big numbers!" and the program will then exit. If `x` is not bigger than 100, then the program will print: "Try again with a bigger number:" and then the user should be prompted to enter another number. The program can only end once the user has entered a number larger than 100, and should repeatedly prompt the user to enter another number if the number provided is smaller than 100.