

# TJ IOI 2017

## Practice Programming Round

Thomas Jefferson High School for Science and Technology

Saturday, May 13, 2017



## Instructions

1. The following section consists of 3 problems, which will not count towards your actual contest score. The purpose of these problems are to familiarize you with the virtual machine environment and using the grader.
2. Each problem consists consists of 3 sample input cases of increasing complexity. 10 points are awarded for each input case correctly solved, for a total of 30 points per problem, and 90 points for the entire round.
3. The first test case will always be the sample case. We may disqualify any programs that consist of only print statements.
4. Programs must read from standard input and print to standard output. Ensure that your program does not print any extraneous output, such as debug statements.
5. Unless otherwise stated, programs must run in 2 seconds and in 256 MB of memory.
6. Accepted languages include Java 8, Python 3, and C/C++. You must submit the source code of your programs, not executable files.
7. For Java programs, the name of the Java class and the file name should be the short name. For example, a solution for the problem with the short name `test` must be in a class named `test`, in a file named `test.java`.
8. In an effort to give back feedback as soon as possible, automated responses are given for each submission. Feedback will consist of success or failure, along with reason for failure if applicable. We reserve the right to make final decisions on judging.
9. If you have a question concerning a problem, you may submit a request for clarification through the grader interface.
10. You are permitted to use any printed material that you have brought with you, including the official TJ IOI 2017 Study Guide. You are also permitted to use the electronic documentation provided to you through the contest site. You may not collaborate with anyone outside of your team.
11. Each team may use only one computer and all code must be written and submitted through this computer. If you are experiencing technical issues, alert a proctor and we will assist you.
12. You are not permitted to access the Internet in any way other than accessing the contest site. You may not use any electronic or communications devices other than the computer. You may not intentionally exit the virtual machine for any reason. You may not attempt to attack or damage the grader. Breaking any of these rules may be grounds for disqualification.
13. Good luck and have fun!

**Do not turn the page until instructed to do so.**

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## A    **Captcha**

Larry is a new employee at TJ IOI Inc., and as a part of the application process, he must verify that he is a human. In order to do so, the Human Resources Department of TJ IOI Inc. have asked him to add two numbers. However, on the day of the interview, Larry was feeling sick! He would like to develop a robot to take his place instead. Please help Larry program the robot!

### **INPUT FORMAT:**

The first line of input contains two integers  $A$  and  $B$  ( $1 \leq A, B \leq 100$ ).

### **OUTPUT FORMAT:**

Output a single integer, the sum of  $A$  and  $B$ .

### **SAMPLE INPUT:**

3 4

### **SAMPLE OUTPUT:**

7



## B Work

At TJ IOI Inc., we pride ourselves in the vast amount of work that gets done. Every day, over three million hand-written instances of the word “work” are manufactured for consumption. However, TJ IOI Inc. has contracted you to build a better machine to manufacture specific amounts of the word “work”. Please help increase our productivity!

### INPUT FORMAT:

The first line of input contains one integer  $N$  ( $1 \leq N \leq 100$ ).

### OUTPUT FORMAT:

Output the word “work”  $N$  times.

### SAMPLE INPUT:

6

### SAMPLE OUTPUT:

work  
work  
work  
work  
work  
work





## C Higher

During lunch break at TJ IOI Inc., Larry has invented a new game called “Higher” that he plays with Kevin. The rules are simple: Larry and Kevin both state a number, and whoever states the higher number wins. If there is a tie, Larry will win. Help figure out who will win!

### INPUT FORMAT:

The first line of input contains two integers  $A$  and  $B$  ( $1 \leq A, B \leq 100$ ), where  $A$  is Larry’s number and  $B$  is Kevin’s number.

### OUTPUT FORMAT:

If Larry wins, output “LARRY”. If Kevin wins, output “KEVIN”. If there is a tie, output “LARRY”.

### SAMPLE INPUT:

3 4

### SAMPLE OUTPUT:

KEVIN

