



## Maratona de Programação da SBC 2024

Sub-Regional Brasil do ICPC  
Competencia Boliviana de Programación  
The 2024 ICPC Gran Premio de Centroamerica  
The 2024 ICPC Gran Premio de Mexico

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### Warmup

#### Time limits

Time is given in seconds:

Problem	C/C++	Java & Kotlin	Python
A	4.5	5.5	4.5
B	0.1	0.2	0.1
C	0.7	3.0	0.7
D	0.1	0.3	0.1

#### Memory limits

C,C++,Python: 1GB

Java: 1GB + 100MB stack

Kotlin: 1GB + 100MB stack

#### Other limits

File size: 100KB

Output file size: 1MB

#### Building commands

C: `gcc -g -O2 -std=gnu11 -static -lm`

C++20: `g++ -g -O2 -std=gnu++20 -static`

Java: `javac`

Kotlin: `kotlinc -J-Xms1024m -J-Xmx1024m -J-Xss100m -include-runtime`

#### C/C++

- Your program should return zero, executing, as last command `return 0` or `exit(0)`.
- It's been noticed that in some problems where the inputs are too big, the objects `cin` could be slow due to the buffer synchronization from the library `stdio`. If you still want to use `cin` and `cout`, a work around this problem is to use `ios_base::sync_with_stdio(0)`, and the beginning of your `main` function. Note that, in this case, using `scanf` and `printf` in the same program is not recommended, because having separate buffer could cause unexpected behaviors.

**Java**

- Do not declare ‘package’ in your Java program.
- Note that you should obey convention while naming the source file. This means that name of your public class should be a capital letter (A, B, C, etc).
- The command to execute a Java solution is the following: `java -Xms1024m -Xmx1024m -Xss100m`

**Kotlin**

- Do not declare ‘package’ in your Kotlin program.
- Note that you should obey convention while naming the source file. This means that name of your public class should be a capital letter (A, B, C, etc).
- The command to execute a Kotlin solution is the following: `java -Xms1024m -Xmx1024m -Xss100m`
- Warning: it is not guaranteed that the solutions in Kotlin are going run to the established time limits.

**Python**

- Be careful while selecting the right version while submitting
- Warning: it is not guaranteed that the solutions in Python are going run to the established time limits.

## Instructions to submit a solution in Boca

**Submitting solutions**

To submit a solution to a problem you should use Boca’s web portal:

- Open your browser
- Login with your team credentials (use the provided user and password).
- Go to the **Runs** tab. Select the target problem, the language used and the source file.

**Verdicts**

To see the verdict of the judge to your submission you should use Boca’s web portal:

- Open your browser
- Login with your team credentials (use the provided user and password).
- Go to the **Runs** tab.

The verdicts you can get from the judge to your submission are the following:

- 1 - YES
- 2 - NO - Compilation error
- 3 - NO - Runtime error
- 4 - NO - Time limit exceeded
- 5 - NO - Wrong answer
- 6 - NO - Contact staff
- 7 - NO - Class name mismatch
- 8 - NO - Wrong language

- 9 - NO - Problem mismatch

The meaning of 1, 2, 3 and 4 are self-explanatory

- Regarding 1 and 5:
  - if the output of the solution submitted by the team is exactly the same as the judge’s output , the verdict is “YES’
  - otherwise is “Wrong Answer’.
- Regarding 6: this verdict is used in unexpected circumstances. In this case, to get more information use the menu “Clarifications” and provide the “run” number.
- Regarding 7: can only be obtained from solutions written in Java or Kotlin. Occurs when a team submits a solution with a different main class name than specified, causing an error while executing the submission. This verdict is not used in submissions written in C/C++ or Python.
- Regarding 8: most of the times used for solutions written in Python3, however, it can be presented in other languages.
- Regarding 9: wrong problem selected when submitting the solution.

Notice that it is not always possible to distinguish between verdicts 3, 7 ,8 and 9. For example, when a team submits a solution to the problem B. java where the public class A is the main one for the problem textttA, the verdict could be “Class name mismatch” or “Problem mismatch”.

### Clarifications

To request clarifications regarding a problem statement you should use Boca’s web portal:

- Open your browser
- Login with your team credentials (use the provided user and password).
- Pick the problem from where you want clarifications and write your question.

### Score

To visualize the scoreboard, you should use Boca’s web portal:

- Open your browser
- Login with your team credentials (use the provided user and password).
- To go the **Score** tab to visualize the local score board.