International Olympiad in Informatics 2017
July 28 – August 4, 2017
Tehran, Iran
Practice Tasks

`notice`
Language: English

Notice

Each task has an attachment package that you can download from the contest system.

There are some "output-only" tasks, for which:

- The input test cases are given in the attachment package. All you need to do is to submit output files for the given test cases.
- You may have up to 100 submissions. In each submission, you may submit the output files for any subset of the test cases.

For the other tasks:

- You have to submit exactly one file. The file name is given in the task statement header.
- The attachment package contains sample graders, sample implementations, and example test cases.
- This file should implement the procedures described in the task statement using the signatures provided in the sample implementations.
- These procedures must behave as described in the task statement.
- You are free to implement other procedures.
- You may have up to 50 submissions for each task.
- In sample grader inputs, every two consecutive numbers on a single line are separated by a single space, unless another format is explicitly specified.
- Your submissions must not interact in any way with the standard input/output streams or with any other file. In particular, reading anything from the standard input or printing anything to the standard output may result in `Security Violation` as the grading outcome. You may output anything to the standard error stream.

Conventions

The task statements use generic type names `bool`, `integer`, `int64`, and `int[]` (array).

In each of the supported programming languages, the graders use appropriate data types or implementations from that language, as listed below:

Language	`bool`	`integer`	`int64`	`int[]`	length of array a
C++	`bool`	`int`	`long long`	`std::vector<int>`	`a.size()`
Pascal	`boolean`	`longint`	`int64`	`array of longint`	`Length(a)`
Java	`boolean`	`int`	`long`	`int[]`	`a.length`

Limits

Task	Time limit	Memory limit
Mountains	1 second	256 MB
Cup	1 second	256 MB
Coins	1 second	256 MB
Sudoku	output-only	output-only