

Lab Sheet - 4

The purpose of this lab is to let you **solve problems on your own**. 6 problems from Codeforces are considered. They are **simple** to read and understand, requires you to arrive at solution using **simple logic** and needs about **few lines of code** to accomplish the task. If you deem it necessary, you can break it into few steps and take an incremental approach to solve.

- You have 3 hours of theory and 3 hours of lab. All 6 hours can be used for solving.
- Each hour you can try one problem. If you need extra time to solve, please spend time outside of class hours.
- If you are stuck even after trying out enough, you can take help from your instructor.
- Refer to Python Basics for syntax. It should be sufficient to code.

Note: If you don't understand the problem, don't proceed to come up with a solution. If you are not clear about the solution, don't proceed to coding. You will only be spending more time due to this unhealthy approach.

1. Elections (1593A)
 - a. <https://codeforces.com/contest/1593/problem/A>
 - b. Requires simple math.
2. Fafa and his company (935A)
 - a. <https://codeforces.com/problemset/problem/935/A>
 - b. Iteration and divisibility will be required.
3. Elephant (617A)
 - a. <https://codeforces.com/problemset/problem/617/A>
 - b. A simple math that uses division and remainder.
4. Dice rolling (1093A)
 - a. <https://codeforces.com/contest/1093/problem/A>.
 - b. Requires bit of smart math. Think differently.
5. Team (231A)
 - a. <https://codeforces.com/contest/231/problem/A>.
 - b. Requires counting and tracking.
6. Candies and two sisters (1335A)
 - a. <https://codeforces.com/contest/1335/problem/A>.
 - b. Requires basic math.

Note: Please ensure the solutions are submitted and accepted in Codeforces.

Important note: You must try on your own and drill your way through. Don't mind if you struggle. Without struggle, there is no learning. Get used to the struggling and overcoming. That is very normal in problem solving. You can seek help after you have tried enough.

Submission: The proof of acceptance (screenshots) along with source code for all 6 problems must be submitted in [Teams](#) → [Week 4 - Assignment](#). Sample format below.

By swaminathanj, contest: Codeforces Beta Round #4 (Div. 2 Only), problem: (A) Watermelon, **Accepted**, [Copy](#)

```
#include <iostream>
using namespace std;
int main() {
    int w;
    cin >> w;
    if ( w <= 2 ) {
        cout << "NO";
        return 0;
    }
    if ( w % 2 == 0 )
        cout << "YES";
    else
        cout << "NO";
    cout << endl;
    return 0;
}
```

→Judgement Protocol

Test: #1, time: 0 ms., memory: 3624 KB, exit code: 0, checker exit code: 0, verdict: OK

Input	8
Output	
Answer	YES
Checker Log	ok answer is YES

Test: #2, time: 30 ms., memory: 3620 KB, exit code: 0, checker exit code: 0, verdict: OK

User id, Acceptance status, and Source code visible clearly. Don't crop the screenshot in any way.

The code shown above is in C++. Your submission would have Python code instead.