Lab 3 Instructions

Sep 20, 2019

Instructions

1. **Try to apply the method from Monday**
    a. Understand the problem
    b. Come up with a plan
        i. Is there an easier but related problem?
        ii. When does a partial solution fail?
    c. Carry out the plan
    d. Look back

Hints (Spoilers!)

Almost Equal

- Look at the two examples
  - How does the first one work?
  - How does the second one fail?
- Can you ensure the sum changes by at most 1 when the range moves without guaranteeing the global difference?

Slava and tanks

- Is there a lower bound on the answer?
  - What if n is even?
- Is this lower bound possible?
  - Again, what if n is even?

Ticket Game

- Can you simplify the problem?
  - What if there’s only ? on one side of the ticket?
  - What if there’s only 2 ?s ?
    - What are the possible cases for having 2 ?s ?

Dividing Island

- Can you come up with a case that has no solution?
- Can you solve the problem if you can have at most one region be separated into 2?
- Can you patch the solution so it works for the original problem?