

File Edit Selection View Go Run Terminal Help ↻ ↽ codes ⌂ ⌂ ⌂ ⌂ - ⌂ ⌂ ⌂ X

sumOfDigits.cpp reverseNumber.cpp

internship stuffs > reverseNumber.cpp > main()

```
1 #include<iostream>
2 using namespace std;
3
4 int main(){
5     int num, rev=0, rem, base=1;
6     cout<<"Enter number: ";
7     cin>>num;
8     while(num>0){
9         rem=num%10;
10        rev=rev*10+rem;
11        num/=10;
12    }
13    cout<<"Reverse of the given number: "<<rev<<endl;
14 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

PS C:\Users\Rishabh\Desktop\stuff\codes\internship stuffs> cd "c:\Users\Rishabh\Desktop\stuff\codes\internship stuffs\" ; if (\$?) { g++ reverseNumber.cpp -o reverseNumber } ; if (\$?) { .\reverseNumber }
Enter number: 12345
Reverse of the given number: 54321
PS C:\Users\Rishabh\Desktop\stuff\codes\internship stuffs>

Ln 7, Col 14 Spaces: 4 UTF-8 CRLF C++ Go Live Win32 ⌂ ENG IN 03:09 PM 25-11-2022

The screenshot shows a dark-themed code editor interface, likely Visual Studio Code, with the following details:

- Top Bar:** File, Edit, Selection, View, Go, Run, Terminal, Help.
- Search Bar:** A search bar with the placeholder "codes".
- File Explorer:** On the left, showing files: sumOfDigits.cpp, reverseNumber.cpp, and sumOfDigitsUntilSingle.cpp.
- Terminal:** The main area displays a terminal session:

```
internship stuffs > sumOfDigitsUntilSingle.cpp > sumofDigits(int)
1 #include<iostream>
2 using namespace std;
3
4 int sumofDigits(int n){
5     int rem, sum=0;
6     while(n>0){
```

PS C:\Users\Rishabh\Desktop\stuff\codes\internship stuffs> cd "c:\Users\Rishabh\Desktop\stuff\codes\internship stuffs\" ; if (\$?) { g++ sumOfDigitsUntilSingle.cpp -o sumOfDigitsUntilSingle } ; if (\$?) { .\sumOfDigitsUntilSingle }
Enter the number: 192
3
PS C:\Users\Rishabh\Desktop\stuff\codes\internship stuffs>
- Bottom Status Bar:** Shows Ln 6, Col 16, Spaces: 4, UTF-8, CRLF, C++, Go Live, Win32, and system icons for network, battery, volume, and date/time (12:06 PM, 30-11-2022).

A screenshot of the Microsoft Visual Studio Code (VS Code) interface. The main area shows a C++ file named `largeofFour.cpp` with the following code:

```
internship stuffs > largeofFour.cpp > main()
1 #include<iostream>
2 using namespace std;
3
4 int main(){
5     int numbers[4], large;
6     for(int i=0; i<4; i++){
7         cin>>numbers[i];
8     }
9     cout<<"Given numbers: ";
10    for(int i=0; i<4; i++){
11        cout<<numbers[i]<< " ";
12    }
13    large = numbers[0];
14    for(int i=0; i<4; i++){
15        if(numbers[i]>large){
16            large=numbers[i];
17        }
18    }
19    cout<<endl<<"Largest = "<<large<<endl;
20    return 0;
21 }
```

The terminal tab at the bottom shows the execution of the program:

```
PS C:\Users\Rishabh\Desktop\stuff\codes\internship stuffs> cd "c:\Users\Rishabh\Desktop\stuff\codes\internship stuffs\" ; if ($?) { g++ largeofFour.cpp -o largeofFour } ; if ($?) { .\largeofFour }
}
2244
1857
99999
10
Given numbers: 2244 1857 99999 10
Largest = 99999
PS C:\Users\Rishabh\Desktop\stuff\codes\internship stuffs>
```

The status bar at the bottom right shows the date and time: 30-11-2022, 07:56 PM.

A screenshot of a web browser window showing the URL [codechef.com/problems/FCTRL2?tab=submissions](https://www.codechef.com/problems/FCTRL2?tab=submissions). The browser has many tabs open, including ones for Small factors!, Red Light, Playing with CC, Broken Teal, Coronaviru, Box of Clues, Chef and Baker, Making a Difference, Minions, Testing Room, Wordle, Compress, Sort the Array, Substring, Daily Trainer, and various YouTube links.

The main content is for the problem "Small factorials". The difficulty rating is 648. The "Submissions" tab is selected. A sidebar on the left shows "Explained codes" and "Others' Submissions". The "Explained codes" section lists five submissions from users mdriyaz5965, grayblade, ajeetmeena701, akku\_280, and prasad1508, all in C++17, with results marked as correct. The "Others' Submissions" section allows viewing all participants' submissions. The right side displays the user's submission details: language C++17, code content (1, 2, 5, 3), badge progress (Problem Solver Badge at 66/250), status (Correct Answer), time (0.00s), and a congratulatory message. Buttons for "Compile & Run" and "Submit Code" are present. The bottom of the screen shows a taskbar with icons for File Explorer, WhatsApp, Google Chrome, and others, along with system status indicators like battery level, signal strength, and date/time (14-01-2023, 12:17 AM).

A screenshot of a web browser showing multiple tabs open. The active tab is 'codechef.com/problems/DOLL'. Other visible tabs include 'Small fact', 'Red L', 'Playing w...', 'Broken Te...', 'Coronavi...', 'Box of Cl...', 'Chef and...', 'Making e...', 'Minions', 'Testing R...', 'Wordle...', 'Compre...', 'Sort the...', 'Substrin...', 'Daily Tra...', and several others related to code challenges.

← Red Light, Green Light Difficulty Rating: 984 ☽ Expand ▾

◀ Prev Problem Next Problem ▶

**Statement**

Hints

Submissions

Solution

Ask a Doubt

C++17

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- $1 \leq T \leq 10^5$
- $1 \leq N \leq 10^5$
- $1 \leq K \leq 10^6$
- $1 \leq H_i \leq 10^6$  for every  $1 \leq i \leq N$ .
- The sum of  $N$  across all test cases does not exceed  $5 \cdot 10^5$ .

```
5 8
9 3 8 8 4
4 6
1 2 3 4
```

**Sample 1:**

| Input     | Output |
|-----------|--------|
| 3         | 2      |
| 4 10      | 1      |
| 2 13 4 16 | 0      |
| 5 8       |        |
| 9 3 8 8 4 |        |
| 4 6       |        |
| 1 2 3 4   |        |

**Explanation:**

**Test Case 1:** Gi-Hun and Ali have height 10. For Ali to be visible to Gi-Hun, the second person (with height 13) and the fourth person (with height 16) need to get shot. Hence, the minimum number of players who need to get shot is 2.

**Test Case 2:** Gi-Hun and Ali have height 8. For Ali to be visible to Gi-Hun, the first person (with height

**Problem Solver Badge**

65 / 250



Next Problem

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Status: ✓ Correct Answer

Submission ID: 85449921

Time:

0.23s

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## Playing with Matches

Difficulty Rating: 986



Expand ▾

◀ Prev Problem

Next Problem ▶

Statement

Hints

Submissions

Solution

Ask a Doubt

C++17

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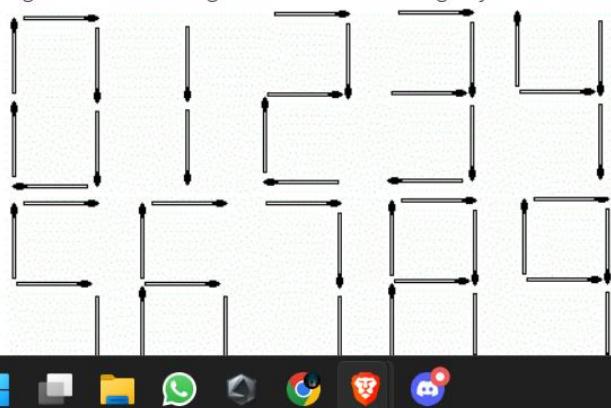
## Problem

Read problems statements in [Mandarin Chinese](#), [Russian](#), [Vietnamese](#), and [Bengali](#) as well.

Chef's son Chefu found some matches in the kitchen and he immediately starting playing with them.

The first thing Chefu wanted to do was to calculate the result of his homework — the sum of  $A$  and  $B$ , and write it using matches. Help Chefu and tell him the number of matches needed to write the result.

Digits are formed using matches in the following way:



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65 / 250



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Next Problem

Status: ✓ Correct Answer

Submission ID: 85450035

Time:

0.01s

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Difficulty Rating: 1204      Expand

**Statement** Submissions Solution Ask a Doubt

## Problem

Read problems statements in [Mandarin Chinese](#) and [Russian](#).

Chef is judging a game called "Broken telephone". There are total  $N$  players taking part in the game. They are all sitting in a line. In the start of the game, first player is given a secret message written on a sheet of paper. Then they keep sending the message by whispering it to the player sitting immediate right to one and so on until it reaches the last person.

Finally, the message received by the last player is compared with the message said by first player. If these messages aren't equal, there is someone who has misheard the message or whispered it wrongly to the next player. If messages is equal, then the players win and receive a tasty chocolate.

Note that first player receives the message on a sheet of paper, thus he cannot mishear it.

As Chef wants to be sure that every player has fulfilled his/ her role in the game, so he asks everyone to state their received messages after the end of the game. You are given an array  $A$  of  $N$  integers denoting messages received by each person.

Please help Chef to find the number of players that could mishear the message or whisper it wrongly.

### Input

C++14

```
5
1 3 1 1 1
4
5 5 5 5
```

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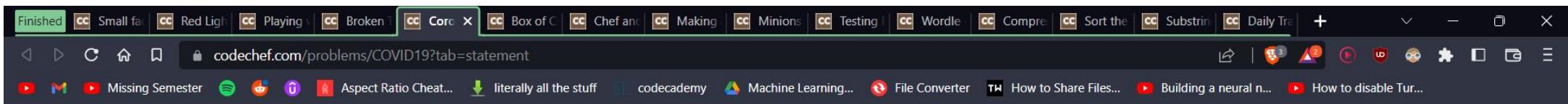
Status: ✓ Correct Answer Submission ID: 85450088

Time: 0.15s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.004266) |

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12:23 AM 14-01-2023



Coronavirus Spread   Difficulty Rating: 1219   Expand

[Statement](#)   [Submissions](#)   [Solution](#)   [Ask a Doubt](#)

**Subtasks**

**Subtask #1 (10 points):**  $N \leq 3$

**Subtask #2 (90 points):** original constraints

**Sample 1:**

| Input     | Output |
|-----------|--------|
| 3         | 1 1    |
| 2         | 3 3    |
| 3 6       | 2 3    |
| 3         |        |
| 1 3 5     |        |
| 5         |        |
| 1 2 5 6 7 |        |

**Time:**  
0.01s

| Sub-Task              | Task # | Result (time)    |
|-----------------------|--------|------------------|
| 1                     | 0      | AC<br>(0.004425) |
| Subtask Score: 10.00% |        | Result - AC      |
| 2                     | 1      | AC<br>(0.008017) |
| Subtask Score: 90.00% |        | Result - AC      |
| Total Score = 100.00% |        |                  |

**Explanation:**

**Example case 1:** The distance between the two people is 3, so the virus cannot spread and at the end, there will always be only one infected person.

**Example case 2:** The distance between each two adjacent people is 2, so all of them will eventually get infected.

**Example case 3:**

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ENG IN   12:25 AM   14-01-2023

Screenshot of a browser window showing multiple tabs open, including one for CodeChef's problem 'Box'.

CodeChef Problem Statement for 'Box of Chocolates' (Difficulty Rating: 1730)

**Statement** | Submissions | Solution | Ask a Doubt | C++17 | Download | Copy | Print | Gear | Expand

**Constraints**

- $1 \leq T \leq 5$
- $1 \leq N \leq 10^5$
- $N$  is even
- $1 \leq W_i \leq 10^5$  for each valid  $i$

**Sample 1:**

| Input       | Output |
|-------------|--------|
| 2           | 3      |
| 6           | 0      |
| 1 1 2 1 1 1 |        |
| 6           |        |
| 1 1 2 1 1 2 |        |

**Problem Solver Badge** 66 / 250  
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**Status:** ✓ Correct Answer Submission ID: 85450241

**Time:** 0.10s

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Windows Taskbar icons: File Explorer, WhatsApp, Google Chrome, Docker, and others. System tray shows ENG IN, 12:26 AM, and 14-01-2023.

Finished | CC Small fact | CC Red Light | CC Playing | CC Broken | CC Coronav | CC Box of C | CC Chef X | CC Making | CC Minions | CC Testing | CC Wordle | CC Compre | CC Sort the | CC Substrin | CC Daily Tra | + | - | X

codechef.com/problems/CHEFTMA?tab=statement

Missing Semester | Aspect Ratio Cheat... | literally all the stuff | codacademy | Machine Learning... | File Converter | How to Share Files... | Building a neural n... | How to disable Tur...

Chef and Time Machine Difficulty Rating: 1717 Expand ▾

◀ Prev Problem Next Problem ▶

Statement

Submissions

Solution

Ask a Doubt

C++14

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Sample 1:

| Input   | Output |
|---------|--------|
| 1       | 3      |
| 4 2 2   |        |
| 5 7 6 1 |        |
| 3 3 1 1 |        |
| 6 3     |        |
| 1 4     |        |

5 7 6 1  
3 3 1 1

Problem Solver Badge

66 / 250

Solve 184 more problems to get Silver Badge



Next Problem

Explanation:

Example case 1.

In this example Chef goes through the following steps:

Use black button 1 on the first day.

Use black button 4 on the second day.

Use white button 3 on the third day.

The arrays A and B are now effectively changed to:

5 7 3 1

4 7 1 1

So he will have 3 uncompleted tasks.

Status: ✓ Correct Answer

Submission ID: 85438663

Time:

0.36s

| Sub-Task | Task # | Result (time) |
|----------|--------|---------------|
| 1        | 0      | AC (0.003716) |
| 1        | 1      | AC (0.003731) |
| 1        | 2      | AC (0.003807) |

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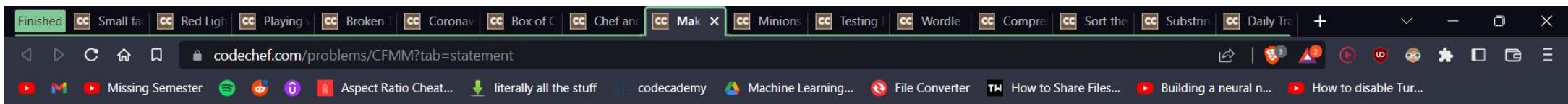
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12:26 AM  
ENG IN  
14-01-2023



Making a Meal    Difficulty Rating: 1214    Expand

[Statement](#)   [Hints](#)   [Submissions](#)   [Solution](#)   [Ask a Doubt](#)

C++14

3  
6  
cplusplus  
oscar

**Sample 1:**

| Input     | Output |
|-----------|--------|
| 3         | 1      |
| 6         | 2      |
| cplusplus | 5      |
| oscar     |        |
| deck      |        |
| fee       |        |
| hat       |        |
| near      |        |
| 5         |        |
| code      |        |
| hacker    |        |
| chef      |        |
| chaby     |        |
| dumbofe   |        |
| 5         |        |
| codechef  |        |
| chefcode  |        |
| fehcedoc  |        |
| cceehfd   |        |
| codechef  |        |

**Problem Solver Badge** 66 / 250

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**Status:** ✓ Correct Answer    Submission ID: 85439037

**Time:** 0.01s

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Finished | CC Small fact | CC Red Light | CC Playing | CC Broken | CC Coronav | CC Box of C | CC Chef and | CC Making | CC Mini | CC Testing | CC Wordle | CC Compre | CC Sort the | CC Substrin | CC Daily Tra | + | - | X

codechef.com/problems/MINVOTE?tab=statement

Missing Semester | Aspect Ratio Cheat... | literally all the stuff | codecademy | Machine Learning... | File Converter | How to Share Files... | Building a neural n... | How to disable Tur...

Minions and Voting Difficulty Rating: 1830 Expand ↘

Prev Problem Next Problem

Statement Submissions Solution

- sum of N over all test cases won't exceed  $10^6$

### Subtasks

#### Subtask #1 (30 points):

- $1 \leq N \leq 500$
- sum of N over all test cases won't exceed 10,000

Subtask #2 (70 points): original constraints

#### Sample 1:

| Input     | Output    |
|-----------|-----------|
| 2         | 1 2 3 2   |
| 4         | 2 3 2 3 1 |
| 4 3 2 1   |           |
| 5         |           |
| 1 2 2 3 1 |           |

#### Explanation:

##### Example case 1:

- The first minion will get only a vote of the second minion.
- The second minion will get votes of the first and third minion.
- The third minion will get votes of the first, second and fourth minion.

C++14

#### Problem Solver Badge

66 / 250

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Next Problem

Status: ✓ Correct Answer

Submission ID: 85439196

Time:

0.30s

| Sub-Task              | Task # | Result (time)    |
|-----------------------|--------|------------------|
| 1                     | 0      | AC<br>(0.005667) |
| 1                     | 1      | AC<br>(0.006652) |
| Subtask Score: 30.00% |        | Result - AC      |
| 2                     | 2      | AC<br>(0.163825) |
| 2                     | 3      | AC<br>(0.145710) |

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ENG IN 12:27 AM 14-01-2023



Testing Robot Difficulty Rating: 1124

Statement Hints Submissions Solution Ask a Doubt

| Input  | Output |
|--------|--------|
| 2      | 5      |
| 6 10   |        |
| RLLLLL |        |
| 2 0    |        |
| LL     |        |

Explanation:

**Example case 1:** The robot followed the path  $10 \rightarrow 11 \rightarrow 12 \rightarrow 11 \rightarrow 10 \rightarrow 9 \rightarrow 8$ .

**Example case 2:** The robot followed the path  $0 \rightarrow -1 \rightarrow -2$ .

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CODECHEF

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C++14

2  
6 10  
RLLLLL  
2 0

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Solve 185 more problems to get Silver Badge

Status: ✓ Correct Answer Submission ID: 85439416

Time: 0.00s

| Sub-Task | Task # | Result (time) |
|----------|--------|---------------|
| 1        | 0      | AC (0.004276) |

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Wordle Difficulty Rating: 804

Statement Hints Submissions Solution Ask a Doubt C++17 START STUNT

Problem

Chef invented a modified wordle.

There is a hidden word  $S$  and a guess word  $T$ , both of length 5.

Chef defines a string  $M$  to determine the correctness of the guess word. For the  $i^{th}$  index:

- If the guess at the  $i^{th}$  index is correct, the  $i^{th}$  character of  $M$  is G.
- If the guess at the  $i^{th}$  index is wrong, the  $i^{th}$  character of  $M$  is B.

Given the hidden word  $S$  and guess  $T$ , determine string  $M$ .

**Input Format**

- First line will contain  $T$ , number of test cases. Then the test cases follow.
- Each test case contains of two lines of input.
- First line contains the string  $S$  - the hidden word.
- Second line contains the string  $T$  - the guess word.

**Output Format**

For each test case, print the value of string  $M$ .

You may print each character of the string in uppercase or lowercase (for example, the strings PaPaP and

Problem Solver Badge 65 / 250 Solve 185 more problems to get Silver Badge Next Problem

Status: ✓ Correct Answer Submission ID: 85450358

Time: 0.01s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 1      | AC<br>(0.003656) |
| 1        | 2      | AC<br>(0.005450) |

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Compile & Run Submit Code

12:28 AM 14-01-2023

## Compress the Video

Difficulty Rating: 940



Expand 

[← Prev Problem](#)

Next Problem >

## Statement

Chef recorded a video explaining his favorite recipe. However, the size of the video is too large to upload on the internet. He wants to compress the video so that it has the minimum size possible.

Chef's video has  $N$  frames initially. The value of the  $i^{th}$  frame is  $A_i$ . Chef can do the following type of operation **any** number of times:

- Choose an index  $i$  ( $1 \leq i \leq N$ ) such that the value of the  $i^{\text{th}}$  frame is **equal** to the value of **either** of its neighbors and **remove** the  $i^{\text{th}}$  frame.

Find the **minimum** number of frames Chef can achieve.

## Input Format

- First line will contain  $T$ , the number of test cases. Then the test cases follow.
  - The first line of each test case contains a single integer  $N$  - the number of frames initially.
  - The second line contains  $N$  space-separated integers,  $A_1, A_2, \dots, A_N$  - the values of the frames.

## Output Format

For each test case, output in a single line the **minimum** number of frames Chef can achieve.

### Constraints



```
C++17
1 2 3
4
2 1 2 2
```

Problem Solver Badge 65 / 250

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[Next Problem](#)

Submission ID: 85450401

Time:

0.04s

| Sub-Task | Task # | Result<br>(time) |
|----------|--------|------------------|
| 1        | 1      | AC<br>(0.003944) |

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## Sort the String

Difficulty Rating: 1112



Expand 

Ask a Doubt

C++17



## Problem

You have a **binary** string  $S$  of length  $N$ . In one operation you can select a substring of  $S$  and **reverse** it. For example, on reversing the substring  $S[2, 4]$  for  $S = 11000$ , we change  $11000 \rightarrow 10011$ .

Find the **minimum** number of operations required to sort this binary string.

It can be proven that the string can always be sorted using the above operation finite number of times.

## Input Format

- The first line of input will contain a single integer  $T$ , denoting the number of test cases.
  - Each test case consists of 2 lines of input.
    - The first line of each test case contains a single integer  $N$  — the length of the binary string.
    - The second line of each test case contains a binary string  $S$  of length  $N$ .

## Output Format

For each test case, output on a new line — the minimum number of operations required to sort the binary string.

## Constraints

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[Next Problem](#)

Status: ✓ Correct Answer

Submission ID: 85450434

Time:

0.395

| Sub-Task | Task # | Result<br>(time) |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.004499) |
| 1        | 1      | AC<br>(0.143986) |
| 1        | 2      | AC               |

Upload code as file ↑

▶ Run

**Submit**

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codechef.com/problems/SUBSTRING?tab=statement

Missing Semester | Aspect Ratio Cheat... | literally all the stuff | codacademy | Machine Learning... | File Converter | How to Share Files... | Building a neural n... | How to disable Tur...

## Substring of a Substring

Difficulty Rating: 1442



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◀ Prev Problem

Next Problem ▶

### Statement

Submissions

Solution

Ask a Doubt

- $S$  consists of lowercase english alphabets only.

### Sample 1:

| Input  | Output |
|--------|--------|
| 2      | 2      |
| abcdab | -1     |
| aaa    |        |

### Explanation:

**Test Case 1:** The maximum length of the string satisfying all required conditions is 2. The string cd satisfies all the conditions. It can be proven that no string of length greater than 2 exists which can satisfy all the conditions.

**Test Case 2:** There is no string possible which satisfies all the required conditions. Thus, the answer is -1.

Did you like the problem statement?

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C++17



### Test against Custom Input

```
2  
abcdab  
aaa
```

Problem Solver Badge 66 / 250

Solve 184 more problems to get Silver Badge

Status: ✓ Correct Answer

Submission ID: 85439824

### Time:

0.04s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 1      | AC<br>(0.019848) |

Upload code as file

Run

Submit



12:29 AM  
ENG IN  
14-01-2023

Finished | CC Small fac | CC Red Light | CC Playing | CC Broken | CC Coronav | CC Box of C | CC Chef an... | CC Making | CC Minions | CC Testing | CC Wordle | CC Compre | CC Sort the | CC Substrin | CC Daily | + | - | X

codechef.com/problems/DAILY?tab=statement

Missing Semester | Aspect Ratio Cheat... | literally all the stuff | codacademy | Machine Learning... | File Converter | How to Share Files... | Building a neural n... | How to disable Tur...

Daily Train Difficulty Rating: 1222

Expand

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Statement

Submissions

Solution

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C++14

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## Problem

A daily train consists of **N** cars. Let's consider one particular car. It has 54 places numbered consecutively from 1 to 54, some of which are already booked and some are still free. The places are numbered in the following fashion:

|    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  |
| 1  | 3  | 5  | 7  | 9  | 11 | 13 | 15 | 17 |
| 2  | 4  | 6  | 8  | 10 | 12 | 14 | 16 | 18 |
| 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 |

The car is separated into 9 compartments of 6 places each, as shown in the picture. So, the 1st compartment consists of places 1, 2, 3, 4, 53 and 54, the 2nd compartment consists of places 5, 6, 7, 8, 51 and 52, and so on.

A group of **X** friends wants to buy tickets for free places, all of which are in one compartment (it's much funnier to travel together). You are given the information about free and booked places in each

Test against Custom Input

```
1 3  
10010111000000101100000111110010011110010010111000101  
0010100000010111100000000000000011110101010111111010  
011110011110000001010100101110001011111010001001111010
```

Problem Solver Badge 66 / 250

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Status: ✓ Correct Answer

Submission ID: 85440607

Time:

0.00s

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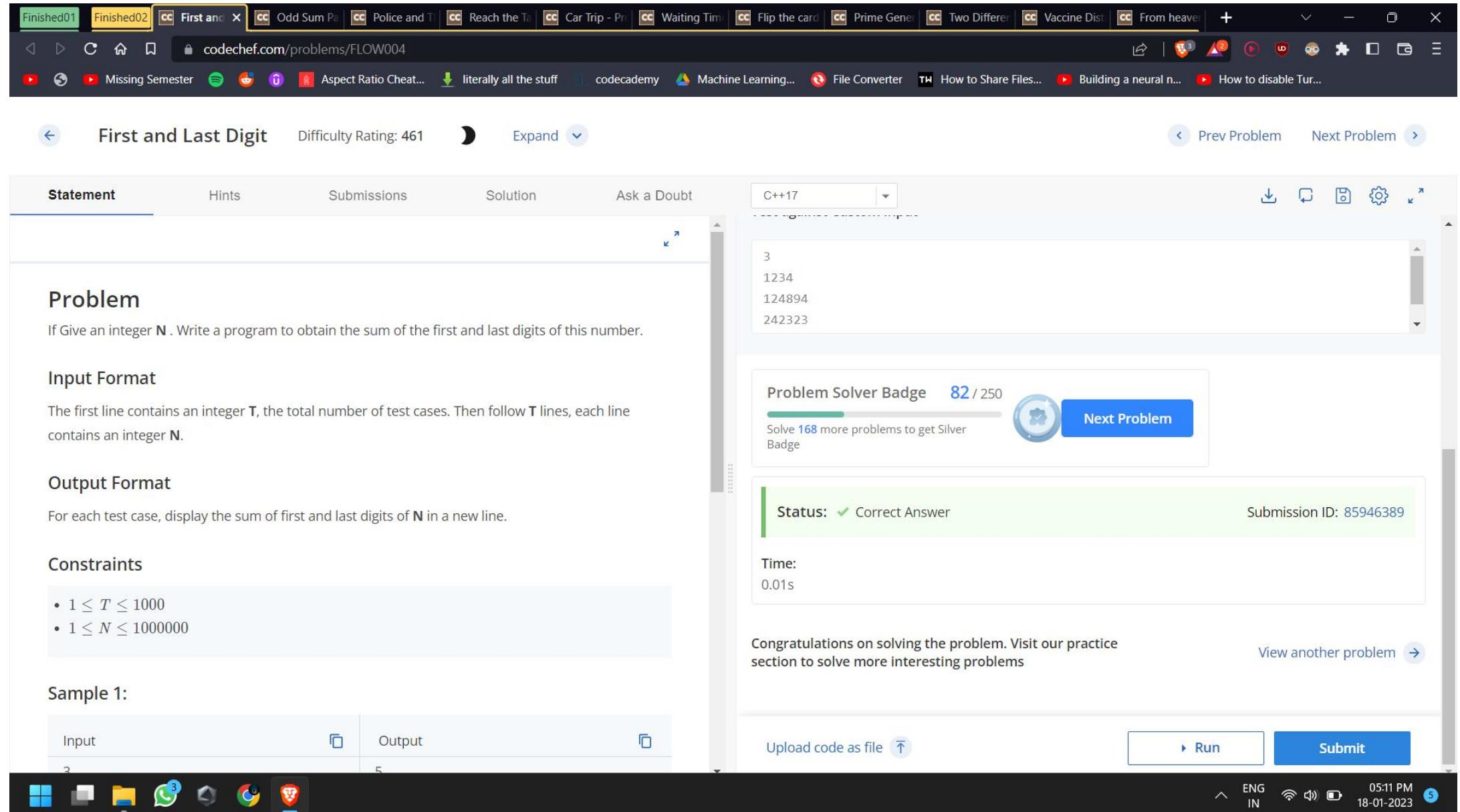
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ENG IN 12:29 AM 14-01-2023



### Odd Sum Pair

Difficulty Rating: 506



Expand 

## Statement

Chef has 3 numbers  $A$ ,  $B$  and  $C$ .

Chef wonders if it is possible to choose *exactly* two numbers out of the three numbers such that their sum is **odd**.

## Input Format

- The first line of input will contain a single integer  $T$ , denoting the number of test cases.
  - Each test case consists of three integers  $A, B, C$ .

## Output Format

For each test case, output YES if you can choose exactly two numbers with odd sum, NO otherwise.

The output is case-insensitive. Thus, the strings YES, yes, yes, and Yes are all considered the same.

## Constraints

- $1 \leq T \leq 100$
  - $1 \leq A, B, C \leq 10$

C++17

Problem Solver Badge 82 / 250

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[Next Problem](#)

Status: ✓ Correct Answer

Submission ID: 85946491

Time:

0.00s

| Sub-Task | Task # | Result<br>(time) |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.003575) |

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codechef.com/problems/POLTHIEF

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Police and Thief Difficulty Rating: 639 Expand ▾

◀ Prev Problem Next Problem ▶

Statement Hints Submissions Solution Ask a Doubt C++17

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## Problem

Chef discovered that his secret recipe has been stolen. He immediately informs the police of the theft.

It is known that the policeman and thief move on the number line. You are given that:

- The initial location of the policeman on the number line is  $X$  and his speed is 2 units per second.
- The initial location of the thief on the number line is  $Y$  and his speed is 1 unit per second.

Find the **minimum** time (in seconds) in which the policeman can catch the thief. Note that, the policeman catches the thief as soon as their locations become equal and the thief will try to evade the policeman for as long as possible.

### Input Format

- The first line of input will contain an integer  $T$  — the number of test cases. The description of  $T$  test cases follows.
- The first and only line of each test case contains two integers  $X$  and  $Y$ , as described in the problem statement.

### Output Format

<https://www.codechef.com/practice> It in a single line the minimum time taken by the policeman to catch the

```
3
1 3
2 1
1 1
```

Problem Solver Badge 82 / 250

Solve 168 more problems to get Silver Badge



Next Problem

Status: ✓ Correct Answer

Submission ID: 85946559

Time:

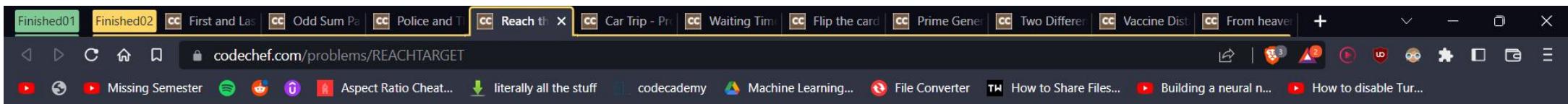
0.01s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 1      | AC<br>(0.003757) |

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Reach the Target Difficulty Rating: 281 Expand ◀ Prev Problem Next Problem ▶

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## Problem

There is a cricket match going on between two teams  $A$  and  $B$ .

Team  $B$  is batting second and got a target of  $X$  runs. Currently, team  $B$  has scored  $Y$  runs.

Determine how many more runs Team  $B$  should score to **win** the match.

Note: The target score in cricket matches is one more than the number of runs scored by the team that batted first.

### Input Format

- The first line of input will contain a single integer  $T$ , denoting the number of test cases.
- Each test case consists of two space-separated integers  $X$  and  $Y$ , the target for team  $B$  and the current score of team  $B$  respectively.

### Output Format

For each test case, output how many more runs team  $B$  should score to win the match.

### Constraints

- $1 \leq T \leq 10$
- $50 < Y < X < 900$

C++17

```
4
200 50
100 99
130 97
```

Problem Solver Badge 82 / 250

Solve 168 more problems to get Silver Badge



[Next Problem](#)

Status: ✓ Correct Answer

Submission ID: 85946622

Time:

0.00s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.003771) |

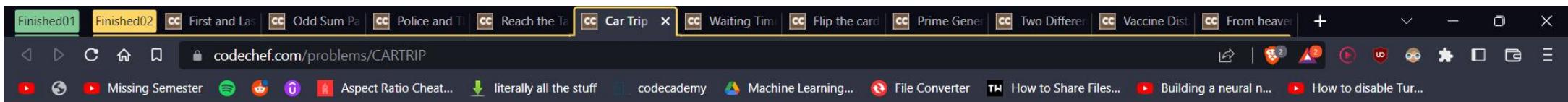
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Car Trip Difficulty Rating: 374       [Expand](#)

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C++17

5  
800  
3  
299

**Problem Solver Badge** 82 / 250  
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Status: Correct Answer    Submission ID: 85946672

Time: 0.00s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.004178) |

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ENG IN 05:15 PM 18-01-2023 5

**Statement**

Chef rented a car for a day.

Usually, the cost of the car is Rs 10 per km. However, since Chef has booked the car for the whole day, he needs to pay for **at least** 300 kms even if the car runs less than 300 kms.

If the car ran  $X$  kms, determine the cost Chef needs to pay.

**Input Format**

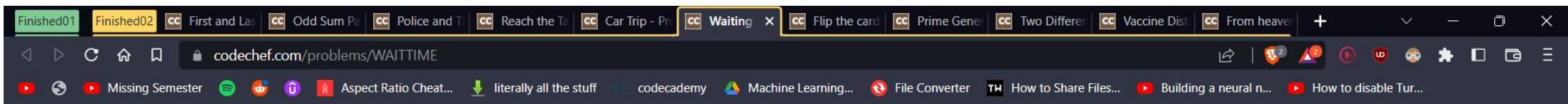
- The first line of input will contain a single integer  $T$ , denoting the number of test cases.
- Each test case consists of a single integer  $X$  - denoting the number of kms Chef travelled.

**Output Format**

For each test case, output the cost Chef needs to pay.

**Constraints**

- $1 \leq T \leq 100$
- $1 \leq X \leq 1000$



[←](#) Waiting Time Difficulty Rating: 319 [Expand](#) [Prev Problem](#) [Next Problem](#) [→](#)

## Statement

[Hints](#)[Submissions](#)[Solution](#)[Ask a Doubt](#)

C++17

## Problem

Chef is eagerly waiting for a piece of information. His secret agent told him that this information would be revealed to him after  $K$  weeks.

$X$  days have already passed and Chef is getting restless now. Find the number of **remaining** days Chef has to wait for, to get the information.

It is guaranteed that the information has not been revealed to the Chef yet.

## Input Format

- The first line of input will contain an integer  $T$  — the number of test cases. The description of  $T$  test cases follows.
- The first and only line of each test case contains two space-separated integers  $K$  and  $X$ , as described in the problem statement.

## Output Format

For each test case, output the number of remaining days that Chef will have to wait for.

## Constraints

 $1 \leq T \leq 500$ 

```
4
1 5
1 6
1 1
```

Problem Solver Badge 82 / 250

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[Next Problem](#)

Status: Correct Answer

Submission ID: 85946711

Time:

0.00s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 1      | AC<br>(0.003744) |

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Finished01 Finished02 CC First and Las CC Odd Sum Pe CC Police and T CC Reach the Ta CC Car Trip - Pr CC Waiting Tim CC Flip the x CC Prime Gener CC Two Differen CC Vaccine Dist CC From heaver + ⌂ ⌄ ⌁ ⌃ ⌅ ⌆ ⌇ ⌈ ⌉ ⌊ ⌋

codechef.com/problems/FLIPCARDS?tab=statement

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Flip the cards Difficulty Rating: 641 ⚡ Expand ↗

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Statement Hints Submissions Solution Ask a Doubt

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## Problem

There are  $N$  cards on a table, out of which  $X$  cards are face-up and the remaining are face-down.

In one operation, we can do the following:

- Select any one card and flip it (i.e. if it was initially face-up, after the operation, it will be face-down and vice versa)

What is the minimum number of operations we must perform so that all the cards face in the same direction (i.e. either all are face-up or all are face-down)?

### Input Format

- The first line contains a single integer  $T$  — the number of test cases. Then the test cases follow.
- The first and only line of each test case contains two space-separated integers  $N$  and  $X$  — the total number of cards and the number of cards which are initially face-up.

### Output Format

For each test case, output the minimum number of cards you must flip so that all the cards face in the same direction.

### Constraints



C++17

4  
5 0  
4 2  
3 3

Problem Solver Badge 82 / 250

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Next Problem

Status: ✓ Correct Answer

Submission ID: 85946747

Time:

0.01s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.003923) |

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codechef.com/problems/PRIME1?tab=statement

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## Prime Generator

Difficulty Rating: 1069

Statement Submissions Solution Ask a Doubt

### Problem

Ram wants to generate some prime numbers for his cryptosystem. Help him please! Your task is to generate all prime numbers between two given numbers.

**Warning: large Input/Output data, be careful with certain languages (though most should be OK if the algorithm is well designed)**

#### Input Format

The first line contains  $t$ , the number of test cases (less than or equal to 10). Followed by  $t$  lines which contain two numbers  $m$  and  $n$  ( $1 \leq m \leq n \leq 1000000000$ ,  $n-m \leq 100000$ ) separated by a space.

#### Output Format

For every test case print all prime numbers  $p$  such that  $m \leq p \leq n$ , one number per line. Separate the answers for each test case by an empty line.

#### Constraints

$(1 \leq m \leq n \leq 1000000000, n-m \leq 100000)$

C++17

```
2
1 10
3 5
```

Problem Solver Badge 82 / 250  
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Status: ✓ Correct Answer Submission ID: 85946798

Time: 1.37s

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Two Different Palindromes Difficulty Rating: 1216 ⚡ Expand ⌄ ⌅ ⌆ ⌇ ⌈ ⌉ ⌊ ⌋

Prev Problem Next Problem ⌄ ⌅ ⌆ ⌇ ⌈ ⌉ ⌊ ⌋

## Statement

Hints

Submissions

Solution

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C++17

Download Copy Print Settings ⌄ ⌅ ⌆ ⌇ ⌈ ⌉ ⌊ ⌋

## Problem

You are given two positive integers  $A$  and  $B$ . You need to construct two **different** binary strings (i.e., they are strings which consist of only 0s and 1s), which satisfy these two conditions:

- Both the strings should be palindromes.
- Each string should have exactly  $A$  0s, and exactly  $B$  1s in them.

Output Yes if two such different binary strings can be constructed and No otherwise.

### Note:

- A string is said to be a palindrome, if the string and the reverse of the string are identical.
- Two strings are said to be different if either their lengths are different, or if they differ in at least one character.

## Input Format

- The first line of input will contain a single integer  $T$ , denoting the number of test cases.
- Each test case contains two space-separated integers,  $A$  and  $B$ , in a new line.

## Output Format

For each test case, output on a new line 'Yes', if you can construct two different binary strings satisfying the conditions. If not, output No.

3  
2 2  
2 3  
3 3

Problem Solver Badge 82 / 250

Solve 168 more problems to get Silver Badge



Next Problem

Status: ✓ Correct Answer

Submission ID: 85946822

Time:

0.19s

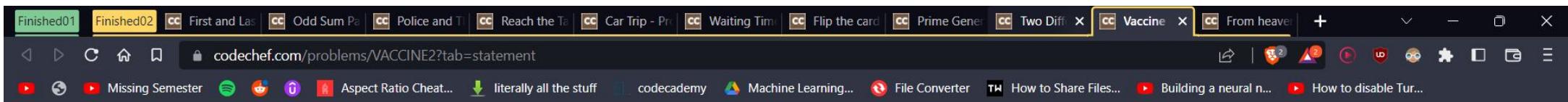
| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.004045) |

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Vaccine Distribution Difficulty Rating: 1219

Statement Submissions Solution Ask a Doubt

## Problem

Read problem statements in [Hindi](#), [Bengali](#), [Mandarin Chinese](#), [Russian](#), and [Vietnamese](#) as well.

Finally, a COVID vaccine is out on the market and the Chefland government has asked you to form a plan to distribute it to the public as soon as possible. There are a total of  $N$  people with ages  $a_1, a_2, \dots, a_N$ .

There is only one hospital where vaccination is done and it is only possible to vaccinate up to  $D$  people per day. Anyone whose age is  $\geq 80$  or  $\leq 9$  is considered to be *at risk*. On each day, you may not vaccinate both a person who is at risk and a person who is not at risk. Find the smallest number of days needed to vaccinate everyone.

### Input

- The first line of the input contains a single integer  $T$  denoting the number of test cases. The description of  $T$  test cases follows.
- The first line of each test case contains two space-separated integers  $N$  and  $D$ .
- The second line contains  $N$  space-separated integers  $a_1, a_2, \dots, a_N$ .

### Output

C++17

```
2
10 1
10 20 30 40 50 60 90 80 100 1
5 2
```

Problem Solver Badge 82 / 250

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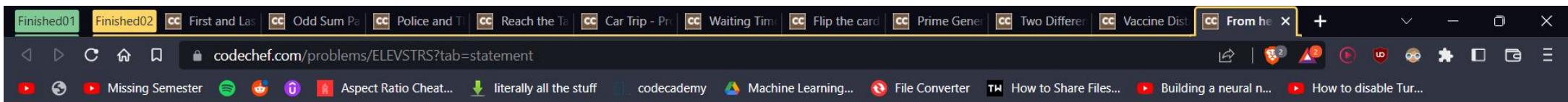
Status: ✓ Correct Answer Submission ID: 85946848

Time: 0.01s

| Sub-Task | Task # | Result (time)    |
|----------|--------|------------------|
| 1        | 0      | AC<br>(0.008196) |

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## From heaven to earth

Difficulty Rating: 1066



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### Statement

Hints

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Solution

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C++14

## Problem

Read problems statements in [mandarin chinese](#), [russian](#) and [vietnamese](#) as well.

Chef has been working in a restaurant which has  $N$  floors. He wants to minimise the time it takes him to go from the  $N$ -th floor to ground floor. He can either take the elevator or the stairs.

The stairs are at an angle of 45 degrees and Chef's velocity is  $V_1$  m/s when taking the stairs down. The elevator on the other hand moves with a velocity  $V_2$  m/s. Whenever an elevator is called, it always starts from ground floor and goes to  $N$ -th floor where it collects Chef (collecting takes no time), and makes its way down to the ground floor with Chef in it.

The elevator covers a total distance equal to  $N$  meters when going from  $N$ -th floor to ground floor or vice versa, while the length of the stairs is  $N * \sqrt{2}$  because the stairs is at angle 45 degrees.

Chef has enlisted your help to decide whether he should use stairs or the elevator to minimise his travel time. Can you help him out?

## Input

- The first line contains a single integer  $T$ , the number of test cases.
- Each test case is described by a single line containing three space-separated integers  $N$ ,  $V_1$ ,  $V_2$ .

```
3
5 10 15
2 10 14
7 14 10
```

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Status:  Correct Answer

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Time:

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