第八届ACM-ICPC暨CCCC-GPLT校内选拔赛初赛题目原文

Problem A: Problem Evaluation machine

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题目 我的提交

Problem Evaluation machine

发布时间：2017年12月3日 12:39 最后更新：2017年12月3日 12:41 时间限制：1000ms 内存限制：128M

描述

Now you want to simulate the behavior of an Evaluation machine. First, you will read some answers given by the submitted programs. Then you'll judge those answers. Assuming that you have already known the right answer C, if the submitted answer B is correct(equals to C), please output "Accepted", otherwise output "Wrong". It's so kind of you that you want to give a hint to those contestants, so if the difference between B and C is too larger, that is to say $|C-B|>R$, you will output "Extremely Wrong".

输入

The input will contain multiple test cases.
For every test case, the first line contains three integers C, R, B, the correct answer, the range, and the answer the program submitted gives.

Limit:
The number of test cases is less than 200 and $1 \leq C, R, B \leq 10^9+7$

输出

For every test case, you should output one line, each line is "Accepted", "Wrong" or "Extremely Wrong". (without quotes).

样例输入1

```
10 4 6
8 8 100
6 6 6
```

样例输出1

```
Wrong
Extremely Wrong
Accepted
```

查看隐藏信息

选择语言

C (GCC 5.4) C++ (G++ 5.4) Java (Oracle JDK 1.8)

提交代码

1

提交代码

Probelm B: CrazyX and His Money

CrazyX and His Money

发布时间：2017年12月3日 12:39 最后更新：2017年12月3日 12:41 时间限制：1000ms 内存限制：128M

描述

CrazyX, the captain of LETTers, has n accounts of Bank of China. There are a_i RMB in each account. He will assign these money to n employee at the end of year, and he will give everyone a account directly. However, the money in each account may not be same. **But CrazyX wants the money for everyone to be the same.** CrazyX can withdraw multiple times, and each time he can withdraw k RMB from one account. But he cannot withdraw money if the money in the account is less than k. Can he make it ?

输入

There are several cases.Process to end of file.

For each case:
First line contains two numbers $n(1 \leq n \leq 500)$ and $k(1 \leq k \leq 100)$, the next line has n integers $a_i(1 \leq a_i \leq 500)$

输出

For each case output "YES" if CrazyX can make the money for everyone to be the same, or output "NO" in one line.

样例输入1

```
3 3
9 12 15
2 2
12 13
```

样例输出1

```
YES
NO
```

查看隐藏信息

选择语言

C (GCC 5.4) C++ (G++ 5.4) Java (Oracle JDK 1.8)

C (GCC 5.4) C++ (G++ 5.4) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

Problem C: YZL recites alphabets

YZL recites alphabets

发布时间：2017年12月3日 12:40 最后更新：2017年12月3日 12:41 时间限制：1000ms 内存限制：128M

描述

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

As is known to all, YZL is quite good at English. One of his superpower reciting the whole alphabets without a breath. However, recently there's something wrong with his breath for he is having a cold, so he has to take a breath in the middle of the reciting. And it's even worse that he can only recite the whole alphabets within one breath, and he found that after the breath he could not continue reciting because he forgot the next N ones. Fortunately, you are here and willing for help. Please tell him what are the next N letters in alphabets. ('A' is after 'Z').

输入

The input will contain multiple test cases.
For every test case, the first line contains a capital letter(A..Z), which indicates the letter which YZL stops, and a integer $N(1 \leq n \leq 100)$, the number of letters you are to tell him.

输出

For every test case you should output in one line with N capital letters which you need to tell YZL.

样例输入1

```
A 10
Y 5
```

样例输出1

```
BCDEFGHIJK
ZABCD
```

查看隐藏信息

选择语言

(•) C (GCC 5.4) ( ) C++ (G++ 5.4) ( ) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

Problem D: LETTers

LETTers

发布时间：2017年12月3日 12:40 最后更新：2017年12月3日 12:42 时间限制：2000ms 内存限制：128M

描述

Welcome to the 8th USTB ICPC programing online contest !

You may know that LETTers is the name of our team,

But what about its meaning?

'-ers' is usually added as a suffix with the meaning of persons,

And 'LETT' is obviously an acronym,

Representing 'Love', 'Excceed', 'Teamwork' and 'Thank'.

Love programming, Exceed yourself, Teamwork in everything, Thank who helped you.

These meanings are substantial, and perchance complicated,

But the problem here for you is simple and easy:

You just need to output the 'LETT' image in size N.

Here size N means a single letter should be printed in N rows and N columns with 'X' for the letters and '.' for empty cells.

What's more, there should be an empty line after each letter.

Notice that N is an odd number and will be no less than 5.

Here's a sample 'LETT' image in size 5:

```
X....
X....
X....
X....
XXXXX

XXXXX
X....
XXXXX
X....
XXXXX

XXXXX
..X..
..X..
..X..
..X..

XXXXX
..X..
..X..
..X..
..X..
```

输入

There is a integer T means the number of test cases in the first line.

For each test case there is one line with a single number N standing for the size of the letters you should output.

Each N is an odd number and will be no less than 5.

Limit:
$T \leq 100$
$n \leq 210$

输出

For each test case with input N, you should output $4 \times N + 4$ lines as described above.

样例输入1

```
1
5
```

样例输出1

```
X....
X....
X....
X....
XXXXX

XXXXX
X....
XXXXX
X....
XXXXX

XXXXX
..X..
..X..
..X..
..X..

XXXXX
..X..
..X..
..X..
..X..
```

查看隐藏信息

选择语言

(•) C (GCC 5.4) ( ) C++ (G++ 5.4) ( ) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

Problem E: Game

Game

发布时间: 2017年12月3日 12:40 最后更新: 2017年12月3日 12:42 时间限制: 1000ms 内存限制: 128M

描述

Nbyby and Ncjcj are playing a game for who should pay for lunch. The game goes like this:

Initially there is a chain with all node unpainted.

Then the game starts. Nbyby and Ncjcj take turns to paint an unpainted node, Nbyby go first and then Ncjcj.

In Nbyby's move, he can paint an unpainted node into white color.

In Ncjcj's move, he can paint an unpainted node into black color, and what's more, all the other nodes which connects with the node directly will be painted or repainted into black color too, even if they are white color before.

When anybody can't make a move, the game stop, with all nodes painted of course. If they can find a node with white color, Nbyby win the game, otherwise Ncjcj. Given the length of chain, who will win the game if both players play optimally?

输入

There is a integer T means the number of test cases in the first line.

For each test case are one lines with one number N stands for the length of chain.

Limit:

$T \leq 1000$

$1 \leq N \leq 1000$

输出

For each test case output one line denotes the answer.

if Nbyby can win, output "Nbyby", otherwise "Ncjcj".

样例输入1

```
3
1
2
3
```

样例输出1

```
Nbyby
Ncjcj
Nbyby
```

查看隐藏信息

选择语言

C (GCC 5.4) C++ (G++ 5.4) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

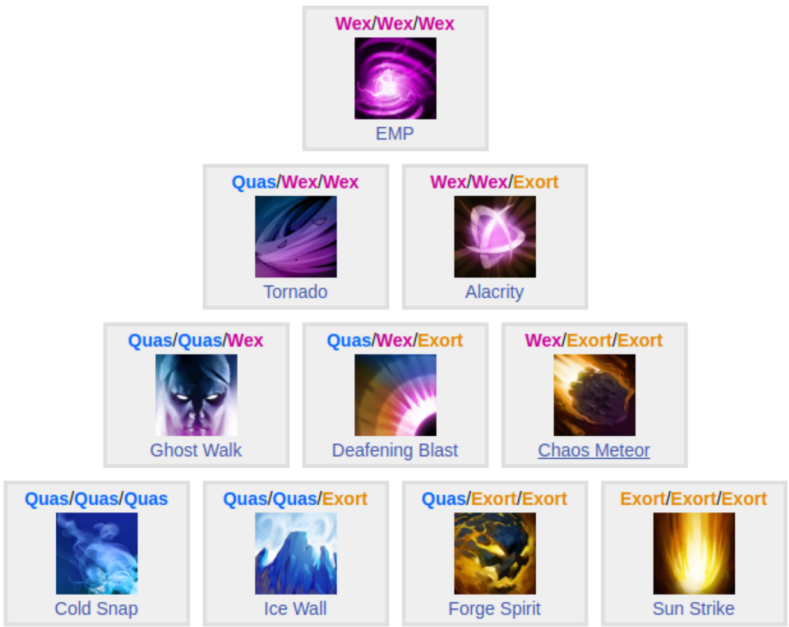
Problem F: invoker

Invoker's abilities

发布时间：2017年12月3日 12:40 最后更新：2017年12月3日 12:43 时间限制：1000ms 内存限制：128M

描述

Invoker is a hero in Dota who is very difficult to master. He is unique in that he possesses a total of 14 abilities in his arsenal. Three of them -Quas, Wex and Exort - are reagents and one is his special ultimate Invoker. After he learns the three basic abilities, he can produce three instances, which serve as the basic ingredients or components for him to create a new ability using his ultimate. The ten composite abilities are shown below.



Now , If we change the amounts of basic reagents and the need of the instances to compose a new abilities.How many new abilities does the Invoker has?

输入

The input starts with a line containing a single integer T, The number of test cases.
Each test case include two integers.The first one is the number of basic reagents n($1 \leq n \leq 10$) ,followed with the other integer m($1 \leq m \leq 10$) denotes the instances amount does the Invoker need to compose a new ability.

输出

In each case, output the a single integer which means the number of new abilities which are composed by n basic reagents.

样例输入1

```
2
3 3
2 2
```

样例输出1

```
10
3
```

查看隐藏信息

选择语言

(•) C (GCC 5.4) ( ) C++ (G++ 5.4) ( ) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

Problem G: winwine

Winmine

发布时间: 2017年12月3日 12:40 最后更新: 2017年12月3日 12:43 时间限制: 1000ms 内存限制: 128M

描述

N integers are listed in an array B, which generated from an array A. For each $i(1 \le i \le n)$,

$b_i = a_{i-1} + a_i + a_{i+1}$,we assume that $a_0 = a_{n+1} = 0$.

Now you are asked to calculate the answer.

$$answer = \sum_{i=1}^{N} a_i$$

输入

The input starts with a line containing a single integer $T(T \le 10)$, The number of test cases.

In each case , the first line contains an only integer $n(n \le 100)$ -the size of B

The second line contains n integers $b_1, b_2, b_3, \ldots, b_n (0 \le b_i \le 100)$-the elements of the array B.It is guaranteed that B is legal which means A really exists .

输出

Output a single integer denotes the sum of array A.

样例输入1

```
2
5
2 3 3 3 2
6
```

```
0 1 0 0 1 0
```

样例输出1

```
5
2
```

查看隐藏信息

选择语言

(•) C (GCC 5.4) ( ) C++ (G++ 5.4) ( ) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

Problem H: yby and buff

Yby and buff

发布时间: 2017年12月3日 12:40 最后更新: 2017年12月3日 12:43 时间限制: 1000ms 内存限制: 128M

描述

nbybyyby is addicted to LOL. In this game, you can get buff lasting for **60 seconds** by killing jungle monster. If you die in the duration of buff, your buff will be captured by the one who killed you and the lasting time will be refreshed. Now, given the killing relationship, nbybyyby wants to know the total time that hero(including enemy) owns the buff.

输入

The input starts with a line containing a single integer $T(T \leq 100)$, The number of test cases.
In each case, the first line contains an single integer $n(n \leq 100)$ - the numbers of killing relationship in this game. The infomation is given in this format: T_i A_i *kill* B_i.
T_i is an integer indicating the time that the event happen, which is given in increasing order. A_i, B_i(A_i $\neq$ B_i) are lower-case letters indicating the name of the hero, except 'a' means the jungle monster.

输出

Output a single integer denotes the total time.

样例输入1

```
3
3
10 b kill a
25 c kill b
100 a kill c
2
0 b kill a
10 a kill b
4
10 b kill a
20 c kill a
30 b kill a
40 b kill c
```

样例输出1

```
75
10
110
```

查看隐藏信息

选择语言

C (GCC 5.4) C++ (G++ 5.4) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

Problem I: Hungry

Hungry

发布时间: 2017年12月3日 12:40 最后更新: 2017年12月3日 12:43 时间限制: 1000ms 内存限制: 128M

描述

TIME FOR LUNCH!

CrazyX does not want to go to the dining room because ... It's hard to say. Hungry indeed so he chooses to go out.

CrazyX is crazy about rice noodle from a special restaurant which has only one cook. For that case, the restaurant has a limit capability of preparing one meal at a time so that one's order will only be prepared after the accomplishments of orders of others who arrived earlier than him. In addition, the

prepared after the accomplishments of orders of others who arrived earlier than him. In addition, the restaurant begins to offer meals at 10: 00 a.m and closes at 2:00 p.m perhaps. As the time goes by, CrazyX became interested in the minimum period to wait to have the meal if he can choose the time to come.

To make the problem simple, CrazyX defines the time by integers like $0,1,2,\ldots$, he also defines that the time is 0 when the restaurant is open and closed when it's M. **OBVIOUSLY the time can be negative.** He knows that the period for preparing the meal is P and when the restaurant finds out that there hasn't enough time to accomplish the meal before time M it will not accept the orders to make sure it can be closed in time.

After some research, CrazyX knows that there are N customers and t_i for the arrival time of each customer , each t_i are distinct but CrazyX can choose any time to come. CrazyX is very kind so he will wait until the one's order finished if they arrived at the same time.

输入

There is a integer T means the number of test cases in the first line.

For each test case, there are two lines. For the first line contains a integer $N(1 \leq N \leq 1e5)$ means the number of customers, a integer $M(1 \leq M \leq 1e9)$ means when the restaurant closed and $P(1 \leq P \leq M \leq 1e9)$ means the period for preparing a meal. The next line contains N integers which means the arrival time $t_i(-1e9 \leq t_i \leq 1e9)$ of each customers.

输出

Output a single integer means the minimum time for CrazyX to wait.

样例输入1

```
1
3 30 10
-2 5 10
```

样例输出1

```
13
```

查看隐藏信息

选择语言

C (GCC 5.4) C++ (G++ 5.4) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码

Problem J: Horse Queen

题目 我的提交

Horse Queen

发布时间：2017年12月3日 12:40 最后更新：2017年12月3日 12:43 时间限制：1000ms 内存限制：128M

描述

This problem is an extension of Eight Queen problem.

Now, the Queen can not only move horizontally, vertically, diagonally, but also move like the Horse.

To make the problem simple, assume that the Queen is on (x,y) point, it can move to the point at $(x+i,y)$, $(x,y+i)$, $(x-i,y)$, $(x,y-i)$, $(x+i,y+i)$, $(x-i,y-i)$, $(x+i,y-i)$, $(x-i,y+i)$, $(x+1,y+2)$, $(x+1,y-2)$, $(x+2,y+1)$, $(x+2,y-1)$, $(x-1,y+2)$, $(x-1,y-2)$, $(x-2,y+1)$, $(x-2,y-1)$, as long as those points are inside the chessboard.

The chessboard is an $N*N$ matrix. Now we put N Queens on the chessboard meanwhile each two Queen cannot move to each other in one step. Can you tell me how many valid solutions we can take?

输入

There is a integer T means the number of test cases in the first line.

For each test case, there is single number in a line. The number $n(1 \leq n \leq 14)$means the length of side of the chessboard.

输出

Output a single integer means the number of valid solutions.

样例输入1

```
4
1
2
3
4
```

样例输出1

```
1
0
0
0
```

查看隐藏信息

选择语言

C (GCC 5.4) C++ (G++ 5.4) Java (Oracle JDK 1.8)

提交代码

```
1
```

提交代码