Incognia Blitz Contest

A. Marathon

1 second, 256 megabytes

You are given four **distinct** integers a, b, c, d.

Timur and three other people are running a marathon. The value a is the distance that Timur has run and b, c, d correspond to the distances the other three participants ran.

Output the number of participants in front of Timur.

Input
The first line contains a single integer t ($1 \leq t \leq 10^4$) — the number of test cases.

The description of each test case consists of four **distinct** integers a, b, c, d ($0 \leq a, b, c, d \leq 10^4$).

Output
For each test case, output a single integer — the number of participants in front of Timur.

input
4 2 3 4 1 10000 0 1 2 500 600 400 300 0 9999 10000 9998

output
2 0 1 3

For the first test case, there are 2 people in front of Timur, specifically the participants who ran distances of 3 and 4. The other participant is not in front of Timur because he ran a shorter distance than Timur.

For the second test case, no one is in front of Timur, since he ran a distance of 10000 while all others ran a distance of 0, 1, and 2 respectively.

For the third test case, only the second person is in front of Timur, who ran a total distance of 600 while Timur ran a distance of 500.

B. Codeforces Checking

1 second, 256 megabytes

Given a lowercase Latin character (letter), check if it appears in the string `codeforces`.

Input
The first line of the input contains an integer t ($1 \leq t \leq 26$) — the number of test cases.

The only line of each test case contains a character c — a single lowercase Latin character (letter).

Output
For each test case, output "YES" (without quotes) if c satisfies the condition, and "NO" (without quotes) otherwise.

You can output the answer in any case (for example, the strings "yES", "yes", "Yes" and "YES" will be recognized as a positive answer).

input
10 a b c d e f g h i j

output
NO NO YES YES YES YES NO NO NO NO

C. Plus or Minus

1 second, 256 megabytes

You are given three integers a, b, and c such that **exactly one** of these two equations is true:

- $a + b = c$
- $a - b = c$

Output `+` if the first equation is true, and `-` otherwise.

Input
The first line contains a single integer t ($1 \leq t \leq 162$) — the number of test cases.

The description of each test case consists of three integers a, b, c ($1 \leq a, b \leq 9$, $-8 \leq c \leq 18$). The additional constraint on the input: it will be generated so that **exactly** one of the two equations will be true.

Output
For each test case, output either `+` or `-` on a new line, representing the correct equation.

input
11 1 2 3 3 2 1 2 9 -7 3 4 7 1 1 2 1 1 0 3 3 6 9 9 18 9 9 0 1 9 -8 1 9 10

output
+ - - + + - + + - - +

In the first test case, $1 + 2 = 3$.

In the second test case, $3 - 2 = 1$.

In the third test case, $2 - 9 = -7$. Note that c can be negative.

D. Love Story

1 second, 256 megabytes

Timur loves codeforces. That's why he has a string s having length 10 made containing only lowercase Latin letters. Timur wants to know how many indices string s **differs** from the string "codeforces".

For example string s = "co**ol**for**s**e**z**" differs from "codeforces" in 4 indices, shown in bold.

Help Timur by finding the number of indices where string s differs from "codeforces".

Note that you can't reorder the characters in the string s.

Input
The first line contains a single integer t ($1 \le t \le 1000$) — the number of test cases.

Each test case is one line and contains the string s, consisting of exactly 10 lowercase Latin characters.

Output
For each test case, output a single integer — the number of indices where string s differs.

input
5 coolforsez cadafurcie codeforces paiuforces forcescode

output
4 5 0 4 9

E. To My Critics

1 second, 256 megabytes

Suneet has three digits a, b, and c.

Since math isn't his strongest point, he asks you to determine if you can choose any two digits to make a sum greater or equal to 10.

Output "YES" if there is such a pair, and "NO" otherwise.

Input
The first line contains a single integer t ($1 \le t \le 1000$) — the number of test cases.

The only line of each test case contains three digits a, b, c ($0 \le a, b, c \le 9$).

Output
For each test case, output "YES" if such a pair exists, and "NO" otherwise.

You can output the answer in any case (for example, the strings "yEs", "yes", "Yes" and "YES" will be recognized as a positive answer).

input
5 8 1 2 4 4 5 9 9 9 0 0 0 8 5 3

output
YES NO YES NO YES

For the first test case, by choosing the digits 8 and 2 we can obtain a sum of $8 + 2 = 10$ which satisfies the condition, thus the output should be "YES".

For the second test case, any combination of chosen digits won't be at least 10, thus the output should be "NO" (note that we can not choose the digit on the same position twice).

For the third test case, any combination of chosen digits will have a sum equal to 18, thus the output should be "YES".

F. Short Sort

1 second, 256 megabytes

There are three cards with letters **a**, **b**, **c** placed in a row in some order. You can do the following operation **at most once**:

- Pick two cards, and swap them.

Is it possible that the row becomes **abc** after the operation? Output "YES" if it is possible, and "NO" otherwise.

Input
The first line contains a single integer t ($1 \le t \le 6$) — the number of test cases.

The only line of each test case contains a single string consisting of each of the three characters **a**, **b**, and **c** exactly once, representing the cards.

Output
For each test case, output "YES" if you can make the row **abc** with at most one operation, or "NO" otherwise.

You can output the answer in any case (for example, the strings "yEs", "yes", "Yes" and "YES" will be recognized as a positive answer).

input
6 abc acb bac bca cab cba

output
YES YES YES NO NO YES

In the first test case, we don't need to do any operations, since the row is already **abc**.

In the second test case, we can swap **c** and **b**: **acb** $\to$ **abc**.

In the third test case, we can swap **b** and **a**: **bac** $\to$ **abc**.

In the fourth test case, it is impossible to make **abc** using **at most one** operation.

G. Odd One Out

1 second, 256 megabytes

You are given three digits a, b, c. Two of them are equal, but the third one is different from the other two.

Find the value that occurs exactly once.

Input
The first line contains a single integer t ($1 \le t \le 270$) — the number of test cases.

The only line of each test case contains three digits a, b, c ($0 \le a, b, c \le 9$). Two of the digits are equal, but the third one is different from the other two.

Output
For each test case, output the value that occurs exactly once.

input
10 1 2 2 4 3 4 5 5 6 7 8 8 9 0 9 3 6 3 2 8 2 5 7 7 7 7 5 5 7 5

output
1 3 6 7 0 6 8 5 5 7

H. Vlad and the Best of Five

1 second, 256 megabytes

Vladislav has a string of length 5, whose characters are each either A or B.

Which letter appears most frequently: A or B?

Input
The first line of the input contains an integer t ($1 \le t \le 32$) — the number of test cases.

The only line of each test case contains a string of length 5 consisting of letters A and B.

All t strings in a test are different (distinct).

Output
For each test case, output one letter (A or B) denoting the character that appears most frequently in the string.

input
8 ABABB ABABA BBBAB AAAAA BBBBB BABAA AAAAB BAAAA

output
B A B A B A A A

I. Stair, Peak, or Neither?

1 second, 256 megabytes

You are given three digits a, b, and c. Determine whether they form a stair, a peak, or neither.

- A *stair* satisfies the condition $a < b < c$.
- A *peak* satisfies the condition $a < b > c$.

Input
The first line contains a single integer t ($1 \le t \le 1000$) — the number of test cases.

The only line of each test case contains three digits a, b, c ($0 \le a, b, c \le 9$).

Output
For each test case, output "STAIR" if the digits form a stair, "PEAK" if the digits form a peak, and "NONE" otherwise (output the strings without quotes).

input
7 1 2 3 3 2 1 1 5 3 3 4 1 0 0 0 4 1 7 4 5 7

output
STAIR NONE PEAK PEAK NONE NONE STAIR

J. My First Sorting Problem

1 second, 256 megabytes

You are given two integers x and y.

Output two integers: the minimum of x and y, followed by the maximum of x and y.

Input
The first line contains a single integer t ($1 \le t \le 100$) — the number of test cases.

The only line of each test case contains two space-separated integers x and y ($0 \le x, y \le 9$).

Output
For each test case, output two integers: the minimum of x and y, followed by the maximum of x and y.

input
10 1 9 8 4 1 4 3 4 2 0 2 4 6 9 3 3 0 0 9 9

output

```
1 9
4 8
1 4
3 4
0 2
2 4
6 9
3 3
0 0
9 9
```

K. Creating Words

1 second, 256 megabytes

Matthew is given two strings a and b, both of length 3. He thinks it's particularly funny to create two new words by swapping the first character of a with the first character of b. He wants you to output a and b after the swap.

Note that the new words may not necessarily be different.

Input

The first line contains t ($1 \le t \le 100$) — the number of test cases.

The first and only line of each test case contains two space-separated strings, a and b, both of length 3. The strings only contain lowercase Latin letters.

Output

For each test case, after the swap, output a and b, separated by a space.

input

```
6
bit set
cat dog
hot dog
uwu owo
cat cat
zzz zzz
```

output

```
sit bet
dat cog
dot hog
owu uwo
cat cat
zzz zzz
```

L. A+B Again?

1 second, 256 megabytes

Given a two-digit positive integer n, find the sum of its digits.

Input

The first line contains an integer t ($1 \le t \le 90$) — the number of test cases.

The only line of each test case contains a single two-digit positive integer n ($10 \le n \le 99$).

Output

For each test case, output a single integer — the sum of the digits of n.

input

```
8
77
21
40
34
19
84
10
99
```

output

```
14
3
4
7
10
12
1
18
```

M. Minimize!

1 second, 256 megabytes

You are given two integers a and b ($a \le b$). Over all possible integer values of c ($a \le c \le b$), find the minimum value of $(c - a) + (b - c)$.

Input

The first line contains t ($1 \le t \le 55$) — the number of test cases.

Each test case contains two integers a and b ($1 \le a \le b \le 10$).

Output

For each test case, output the minimum possible value of $(c - a) + (b - c)$ on a new line.

input

```
3
1 2
3 10
5 5
```

output

```
1
7
0
```

In the first test case, you can choose $c = 1$ and obtain an answer of $(1 - 1) + (2 - 1) = 1$. It can be shown this is the minimum value possible.

In the second test case, you can choose $c = 6$ and obtain an answer of $(6 - 3) + (10 - 6) = 7$. It can be shown this is the minimum value possible.