



🎁 Codeforces celebrates 10 years! We are pleased to announce the crowdfunding-campaign. Congratulate us by the link <https://codeforces.com/10years>.



## A. Even But Not Even

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Let's define a number *ebne* (*even but not even*) if and only if its sum of digits is divisible by 2 but the number itself is not divisible by 2. For example, 13, 1227, 185217 are *ebne* numbers, while 12, 2, 177013, 265918 are not. If you're still unsure what *ebne* numbers are, you can look at the sample notes for more clarification.

You are given a non-negative integer  $s$ , consisting of  $n$  digits. You can delete some digits (they are **not** necessary consecutive/successive) to make the given number *ebne*. You cannot change the order of the digits, that is, after deleting the digits the remaining digits collapse. The resulting number shouldn't contain leading zeros. You can delete any number of digits between 0 (do not delete any digits at all) and  $n - 1$ .

For example, if you are given  $s = 222373204424185217171912$  then one of possible ways to make it *ebne* is: ~~2~~22373~~2~~0442~~4~~18521717191~~2~~ → 2237344218521717191. The sum of digits of 2237344218521717191 is equal to 70 and is divisible by 2, but number itself is not divisible by 2: it means that the resulting number is *ebne*.

Find **any** resulting number that is *ebne*. If it's impossible to create an *ebne* number from the given number report about it.

### Input

The input consists of multiple test cases. The first line contains a single integer  $t$  ( $1 \leq t \leq 1000$ ) — the number of test cases. The description of the test cases follows.

### Codeforces Round #616 (Div. 2)

Finished

#### → Practice?

Want to solve the contest problems after the official contest ends? Just register for practice and you will be able to submit solutions.

Register for practice

#### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

The first line of each test case contains a single integer  $n$  ( $1 \leq n \leq 3000$ ) — the number of digits in the original number.

The second line of each test case contains a non-negative integer number  $s$ , consisting of  $n$  digits.

It is guaranteed that  $s$  does not contain leading zeros and the sum of  $n$  over all test cases does not exceed 3000.

## Output

For each test case given in the input print the answer in the following format:

- If it is impossible to create an *ebne* number, print "-1" (without quotes);
- Otherwise, print the resulting number after deleting some, possibly zero, but not all digits. This number should be *ebne*. If there are multiple answers, you can print **any** of them. Note that answers with leading zeros or empty strings are not accepted. **It's not necessary to minimize or maximize the number of deleted digits.**

## Example

input	Copy
4 4 1227 1 0 6 177013 24 222373204424185217171912	
output	Copy
1227 -1 17703 2237344218521717191	

## Note

In the first test case of the example, 1227 is already an *ebne* number (as  $1 + 2 + 2 + 7 = 12$ , 12 is divisible by 2, while in the same time, 1227 is not divisible by 2) so we don't need to delete any digits. Answers such as 127 and 17 will also be accepted.

In the second test case of the example, it is clearly impossible to create an *ebne* number from the given number.

In the third test case of the example, there are many *ebne* numbers we can obtain by deleting, for example, 1 digit such as 17703, 77013 or 17013. Answers such as 1701 or 770 will not be accepted as they are not *ebne* numbers. Answer 013 will not be accepted as it contains leading zeroes.

→ **Problem tags**

greedy

math

strings

\*1000

No tag edit access

→ **Contest materials**

• Announcement (en)



• Tutorial (en)



### Explanation:

- $1 + 7 + 7 + 0 + 3 = 18$ . As 18 is divisible by 2 while 17703 is not divisible by 2, we can see that 17703 is an *ebne* number. Same with 77013 and 17013;
- $1 + 7 + 0 + 1 = 9$ . Because 9 is not divisible by 2, 1701 is not an *ebne* number;
- $7 + 7 + 0 = 14$ . This time, 14 is divisible by 2 but 770 is also divisible by 2, therefore, 770 is not an *ebne* number.

In the last test case of the example, one of many other possible answers is given. Another possible answer is:  
222373204424185217171912  $\rightarrow$  22237320442418521717191 (delete the last digit).

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