

Problem E

Moon Festival

Time limit: 3 seconds

Memory limit: 1024 megabytes

Problem Description

During the Mid-Autumn Festival, Jimmy had no one to accompany him, so he decided to have barbecue by himself. He happened to discover a very special BBQ restaurant owned by a math enthusiast named Zoey. Each piece of meat had a single character on it, which could be an English letter (either upper-case or lower-case), a digit ('0-9'), a space (' '), a plus ('+'), a minus ('-'), or a period ('.'). The characters on each skewer together formed a string.

Zoey had a special rule: "If you can identify the valid number formed by the characters on your skewer before the meat is fully cooked, your meal is free."

The rules for extracting a valid number are as follows:

- Ignore any leading space (' ').
- Determine the sign by checking whether the character before the first digit is '-' or '+'. If neither appears, assume the number is positive.
- When reading the integer, skip leading zeros and ignore any non-digit characters. If no digits are read, the result is 0.

Jimmy wanted to write a program to extract the valid number from the string, but seeing others happily eating with their friends and family made him too sad to think. To cheer him up, please help Jimmy complete this program.

Input Format

Your program is to read from standard input. The input consists of T test cases. The number of test cases T is given in the first line of the input. Each test data contains a string S , and each test data is on one line.

Output Format

Your program is to write to standard output. Print exactly one line for each test case. The line should contain the value representing the valid number on the skewer. Please see the sample output.

Technical Specification

- $1 \leq T \leq 100$
- $|S| \leq 200$

Sample Input 1

Sample Output 1

6
42
-042
1337c0d3
-0+1
-A1
+A-1

42
-42
133703
-1
1
-1