UESTC 2016 Summer Training #13 Div.2

1:58:21 5:00:00

Overview | Problem | Status | Rank (17) | Discuss

A | B | C | D | E | F | G | H | I

A - A

Time Limit:1000MS **Memory Limit:**262144KB **64bit IO Format:**%I64d & %I64u

Submit | Status

Description

standard input/output

A repeating decimal, also called a recurring decimal, is a number whose decimal representation eventually becomes periodic (i.e., the same sequence of digits repeats indefinitely). The repeating portion of a decimal expansion is conventionally denoted within a pair of brackets so, for example

$1 / 6 = 0.16666666... = 0.1(6) = 0.1666(6) = 0.166(66)$

Both $0.1(6)$ or $0.1666(6)$ or $0.166(66)$ are correct representation of $1 / 6$. Given a recurring decimal representation, your task is to find an irreducible fraction that has that representation.

Input

The first line of input contains the number of tests – $T (T \leq 100)$. Then T tests follow. Each test is printed in a line as a string whose length does not exceed 15. It is guaranteed to be a meaningful representation of a positive fraction.

Output

For each test, print the result in one line in the format Case #x: a/b

Sample Input

Input
4 0.125 0.(142857) 0.1(6) .2
Output
Case #1: 1/8 Case #2: 1/7 Case #3: 1/6 Case #4: 1/5