# 2972 - A DP Problem

**Asia - Tehran - 2003/2004**

In this problem, you are to solve a very easy linear equation with only one variable $x$ with no parentheses! An example of such equations is like the following:

$$2x - 4 + 5x + 300 = 98x$$

An expression in its general form, will contain a `=' character with two expressions on its sides. Each expression is made up of one or more terms combined by `+' or `-' operators. No unary plus or minus operators are allowed in the expressions. Each term is either a single integer, or an integer followed by the lower-case character $x$ or the single character $x$ which is equivalent to $1x$.

You are to write a program to find the value of $x$ that satisfies the equation. Note that it is possible for the equation to have no solution or have infinitely many. Your program must detect these cases too.

## Input

The first number in the input line, $t$ ( $1 \leq t \leq 10$) is the number of test cases, followed by $t$ lines of length at most 255 each containing an equation. There is no blank character in the equations and the variable is always represented by the lower-case character `x'. The coefficients are integers in the range (0..1000) inclusive.

## Output

The output contains one line per test case containing the solution of the equation. If $s$ is the solution to the equation, the output line should contain $\lfloor s \rfloor$ (the ``floor" of $s$, i.e., the largest integer number less than or equal to $s$). The output should be `IMPOSSIBLE' or `IDENTITY' if the equation has no solution or has infinite solutions, respectively. Note that the output is case-sensitive.

## Sample Input

```
2
2x-4+5x+300=98x
x+2=2+x
```

## Sample Output

```
3
IDENTITY
```

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