

This problem revolves around the [Polish notation](#).

- *Polish notation is the way to write parenthesis-free expressions. Its distinguishing feature is that it places operators to the left of their operands.*
- *expression ::= number | (operator expression expression)*
- *operator ::= + | - | × | ÷ | ...*
- *For example: " $(A + B) \times (C - D)$ " is " $\times + AB - CD$ ".*

You are given a Polish notation expression. Operators can be only + and −. Each number in expression is replaced with ?. You have to replace each ? with positive integer number, so that value of expression was 0. Also, you have to make the biggest number in expression as small as possible.

## Input Format

The only line contains string with expression (string will contain only '?', '+' and '-').

## Constraints

- $3 \leq \text{string length} \leq 10^6$ .

## Output Format

Return an integer array,  $k^{th}$  number should be the number for  $k^{th}$  '?' in the string. If there are many solutions print any.

## Sample Input 0

```
-?-??
```

## Sample Output 0

```
1
2
1
```

## Explanation 0

```
- 1 - 2 1   is   1-(2-1) = 0
```