Problem H
Hill Number

A Hill Number is a positive integer, the digits of which possibly rise and then possibly fall, but never fall and then rise. For example:

12321 is a hill number.
12223 is a hill number.
33322111 is a hill number.
1232321 is **not** a hill number.

Given a positive integer, if it is a hill number, print the number of positive hill numbers less than or equal to it. If it is not a hill number, print -1.

Input

Each input will consist of a single test case. Note that your program may be run multiple times on different inputs. Each test case will consist of a single integer n ($1 \le n \le 10^{18}$).

Output

Output a single line with a single integer. If the input is a hill number, then output the number of hill numbers less than or equal to it. If the input is not a hill number, then output -1.

Sample Input 1

```
10
```

Sample Output 1

```
10
```

Sample Input 2

```
55
```

Sample Output 2

```
55
```

Sample Input 3

```
101
```

Sample Output 3

```
-1
```

Sample Input 4

```
1234321
```

Sample Output 4

```
94708
```

Sample Input 5

```
1000
```

Sample Output 5

```
715
```