A. Lucky Year

Apart from having lots of holidays throughout the year, residents of Berland also have whole *lucky* years. Year is considered *lucky* if it has no more than 1 non-zero digit in its number. So years 100, 40000, 5 are *lucky* and 12, 3001 and 12345 are not.

You are given current year in Berland. Your task is to find how long will residents of Berland wait till the next *lucky* year.

Input

The first line contains integer number n ($1 \leq n \leq 10^9$) — current year in Berland.

Output

Output amount of years from the current year to the next *lucky* one.

Examples

input
```
4
```
output
```
1
```

input
```
201
```
output
```
99
```

input
```
4000
```
output
```
1000
```

Note

In the first example next *lucky* year is 5. In the second one — 300. In the third — 5000.