

Project Euler #178: Step Numbers



This problem is a programming version of [Problem 178](#) from [projecteuler.net](#)

Consider the number **45656**.

It can be seen that each pair of consecutive digits of **45656** has a difference of one.

A number for which every pair of consecutive digits has a difference of one is called a step number.

A pandigital number contains every decimal digit from **0** to **9** at least once.

How many pandigital step numbers less than k are there?

Input Format

The input contains only one integer k .

Constraints

- $10^{10} \leq k \leq 10^{10^4}$

Output Format

Print the only integer which is the answer to the problem.

Sample Input 0

```
10000000000
```

Sample Output 0

```
1
```

Explanation 0

The only pandigital step-number less than 10^{10} is **9876543210**.