$\label{lem:contest} Contest Duration: 2025-07-12(Sat) \ 08:00 \ (http://www.timeanddate.com/worldclock/fixedtime.html? \\ iso=20250712T2100\&p1=248) - 2025-07-12(Sat) \ 09:40 \ (http://www.timeanddate.com/worldclock/fixedtime.html? \\ iso=20250712T2240\&p1=248) \ (local time) \ (100 \ minutes) \\ Back \ to \ Home \ (/home) \ (local time) \ (local time)$ 

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#### \*

# **C - Palindromic in Both Bases**

Editorial (/contests/abc414/tasks/abc414\_c/editorial)



Time Limit: 3 sec / Memory Limit: 1024 MiB

 ${\it Score}: 350 \ {\it points}$ 

#### **Problem Statement**

The decimal representation of 414 is 414, which is a palindrome. Also, the octal representation of 414 is 636, which is also a palindrome. Based on this, solve the following problem.

You are given positive integers A and N. Find the sum of all integers between 1 and N, inclusive, whose decimal representation and base-A representation are both palindromes.

Under the constraints of this problem, it can be proved that the answer is less than  $2^{63}$ .

#### **Constraints**

- $2 \le A \le 9$
- $1 < N < 10^{12}$
- All input values are integers.

2025-07-15 (Tue) 22:12:20 -04:00

#### Input

The input is given from Standard Input in the following format:

Copy

Сору



### **Output**

Output the answer in one line.

## Sample Input 1



Copy 1000

### Sample Output 1



The integers satisfying the condition are 1, 2, 3, 4, 5, 6, 7, 9, 121, 292, 333, 373, 414, 585 ( 14 integers), and their sum is 2155.

# Sample Input 2

Copy 99999999999

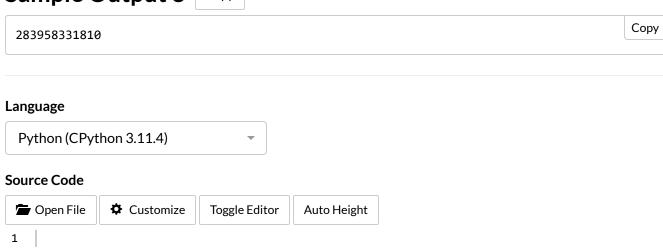
#### Sample Output 2 Сору

Copy 914703021014

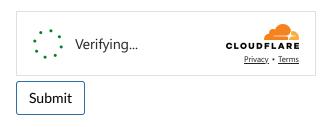
#### Sample Input 3 Сору

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# Sample Output 3 Copy



\* at most 512 KiB



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