

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)

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# C - Palindromic in Both Bases

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Time Limit: 3 sec / Memory Limit: 1024 MiB

Score : 350 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

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

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## Input

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

```
A
N
```

## Output

Output the answer in one line.

### Sample Input 1

[Copy](#)

```
8
1000
```

[Copy](#)

### Sample Output 1

[Copy](#)

```
2155
```

[Copy](#)

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](#)

```
8
999999999999
```

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### Sample Output 2

[Copy](#)

```
914703021014
```

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### Sample Input 3

[Copy](#)

```
6
999999999999
```

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# Sample Output 3

Copy

283958331810

Copy

## Language

Python (CPython 3.11.4)

## Source Code

 Open File


 Customize


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Auto Height

1

\* at most 512 KiB

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