

# New Year's '18 P4 - The Polar Express

---

**Time limit:** 1.0s    **Memory limit:** 256M

---

Mimi has just won two raffle tickets for the Polar Express! Unfortunately, there is just one obstacle in the way — the skill testing question!

Let us define  $S(x)$  to be the sum of digits of  $x$ . Given two positive integers,  $L$  and  $R$ , compute the **number of distinct values** of  $S(x)$ , for  $x = L, L + 1, \dots, R$ .

Mimi has agreed to give you the other ticket if you help her solve this problem. Can you do it?

## Constraints

---

### Subtask 1 [10%]

$$1 \leq L \leq R \leq 10^5$$

### Subtask 2 [90%]

$$1 \leq L \leq R \leq 10^{18}$$

## Input Specification

---

The first and only line of input will contain two space separated integers,  $L$  and  $R$ .

## Output Specification

---

A single integer, the number of distinct values of  $S(x)$ .

## Sample Input

---

```
19 28
```

## Sample Output

---

```
9
```