

## 2687 Amusing Numbers

Let us consider the set of integer numbers between 1 and  $N$  inclusive. Let us order them lexicographically (i. e. like in the vocabulary), for example, for  $N = 11$  the order would be: 1, 10, 11, 2, 3, 4, 5, 6, 7, 8, 9.

Let us denote the position of the number  $K$  in this ordering as  $Q_{N,K}$ . For example,  $Q_{11,2} = 4$ . Given numbers  $K$  and  $M$  find the smallest  $N$  such that  $Q_{N,K} = M$ .

### Input

Input file contains several test cases, one per line. Each of them consists of two integer numbers  $K$  and  $M$  ( $1 \leq K, M \leq 10^9$ ) separated by a space.

### Output

For each input case write a different output line. If such  $N$  that  $Q_{N,K} = M$  exists then write the smallest such  $N$ , otherwise write '0'.

### Sample Input

```
2 4
2 1
100000001 1000000000
1000000000 11
```

### Sample Output

```
11
0
1000000000888888879
0
```