Classroom Decoration

Time Limit: 1 Second
Memory Limit: 256 MB

If you have seen the easy version of this problem in this class before, the only difference between the two versions is that we removed the constraint $r - l \leq 10^6$.

Mattox is planning to decorate the CS 495 classroom with numbers to welcome students for the next semester! In specific, he wants to print out all positive integers in the range $[l, r]$ that contain 495. However, Mattox is not sure if the classroom is large enough for all integers satisfying the constraints. Can you help him find out the total number of integers he will need to print out given the constraints?

Input

The only line of input contains two integers l and r ($1 \leq l \leq r \leq 10^{18}$), as described in the problem statement.

Output

Output a single number denoting the number of integers satisfying the constraints.

Sample Inputs

```
1000 5000
```

Sample Outputs

```
14
```

Note

The numbers satisfying the constraints are: 1495, 2495, 3495, 4495, 4950, 4951, 4952, 4953, 4954, 4955, 4956, 4957, 4958, and 4959.