Problem J. Computational ethnography

Time limit: 1 second
Memory limit: 512 megabytes

Native inhabitants of the L Island write numbers the other way round: most significant digits of a number are written in the end. For instance, number 144 is written as 441.

Novice ethnographer-mathematician Petya is studying square numbers and the culture of Island L's natives. He noticed that some numbers are perfect squares when considered both as regular numbers and as written by Island L's native inhabitants. For instance, number 144 mentioned above is such a number: when considered as written in usual way $144 = 12^2$ and when considered as number 441 written by natives, then $441 = 21^2$. Petya calls such numbers *interesting*.

Petya is interested how many interesting numbers there are from A to B inclusive.

Input

The first line of input contains integer A, the second line of input contains integer B ($1 \le A \le B \le 10^{11}$).

Output

Output the number of interesting numbers from A to B.

Example

standard input	standard output
1 1000	10

Note

In the first sample test interesting numbers are 1, 4, 9, 121, 144, 169, 441, 484, 676 and 961. Island L's native inhabitants don't use leading zeros when writing numbers, so 100 is not an interesting number.