

BACK

Comfortable Numbers



DESCRIPTION

SOLUTIONS 4214

COMMENTS 40



CODEWRITING

SCORE: 300/300

Let's say that number a feels *comfortable* with number b if $a \neq b$ and b lies in the segment $[a - s(a), a + s(a)]$, where $s(x)$ is the sum of x 's digits.

How many pairs (a, b) are there, such that $a < b$, both a and b lie on the segment $[1, r]$, and each number feels *comfortable* with the other?

Example

For $l = 10$ and $r = 12$, the output should be
`comfortableNumbers(1, r) = 2`.

Here are all values of $s(x)$ to consider:

- $s(10) = 1$, so 10 is *comfortable* with 9 and 11;
- $s(11) = 2$, so 11 is *comfortable* with 9, 10, 12 and 13;
- $s(12) = 3$, so 12 is *comfortable* with 9, 10, 11, 13, 14 and 15.

Thus, there are 2 pairs of numbers *comfortable* with each other within the segment $[10, 12]$: (10, 11) and (11, 12).

Input/Output

- [execution time limit] 4 seconds (js)
- [input] integer l

Guaranteed constraints:

$$1 \leq l \leq r \leq 1000.$$

- [input] integer r

Guaranteed constraints:

$$1 \leq l \leq r \leq 1000.$$

- [output] integer

The number of pairs satisfying all the above conditions.

[JavaScript (ES6)] Syntax Tips

```
// Prints help message to the console
```

