X is a good number if after rotating each digit individually by 180 degrees, we get a valid number that is different from X. Each digit must be rotated – we cannot choose to leave it alone.

A number is valid if each digit remains a digit after rotation. 0, 1, and 8 rotate to themselves; 2 and 5 rotate to each other; 6 and 9 rotate to each other, and the rest of the numbers do not rotate to any other number and become invalid.

Now given a positive number N, how many numbers X from 1 to N are good?

Example:

Input: 10

Output: 4

Explanation:

There are four good numbers in the range [1, 10] : 2, 5, 6, 9.

Note that 1 and 10 are not good numbers, since they remain unchanged after rotating.

Note:

- N will be in range [1, 10000].