Problem A

Numbers

Input File: standard input
Output File: standard output
Time Limit: 0.3 seconds (C/C++)
Memory Limit: 256 megabytes

A palindrome is an integer which reads the same backward as forward. For example, numbers 142241 and 102201 are palindromes, but 1023401 and 10510 — no. You want to represent a number n as the sum of two palindromes. Find the number of ways to do it.

Input

There is only one line containing the integer n ($1 \le n \le 10^{18}$).

Output

Output one number — the number of ways to represent the number n as the sum of two palindromes.

Sample input	Sample output
156	4
9524	4
42657	6
5735832847451	28

Note

In the first test, the following pairs of numbers are suitable: $(5, 151)$, $(55, 101)$, $(101, 55)$, $(151, 5)$.
In the second test, the following pairs of numbers are suitable: $(515, 9009)$, $(636, 8888)$, $(8888, 636)$, $(9009, 515)$.
In the third test, the following pairs of numbers are suitable: $(33, 42624)$, $(333, 42324)$, $(4884, 37773)$, $(37773, 4884)$, $(42324, 333)$, $(42624, 33)$.