

A. Calculating Function

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

For a positive integer n let's define a function f :

$$f(n) = -1 + 2 - 3 + \dots + (-1)^n n$$

Your task is to calculate $f(n)$ for a given integer n .

Input

The single line contains the positive integer n ($1 \leq n \leq 10^{15}$).

Output

Print $f(n)$ in a single line.

Examples

input

4

Copy

output

2

Copy

input

5

Copy

output

-3

Copy

Note

$$f(4) = -1 + 2 - 3 + 4 = 2$$

$$f(5) = -1 + 2 - 3 + 4 - 5 = -3$$

Codeforces Round #277 (Div. 2)

Finished

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