Problem D. Calculating Function

Time limit	1000 ms
Mem limit	262144 kB
Input file	stdin
Output file	stdout

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

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

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	Output
4	2

Input	Output
5	-3

Note

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

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