A. Arpa's hard exam and Mehrdad's naive cheat

time limit per test
1 second
memory limit per test
256 megabytes
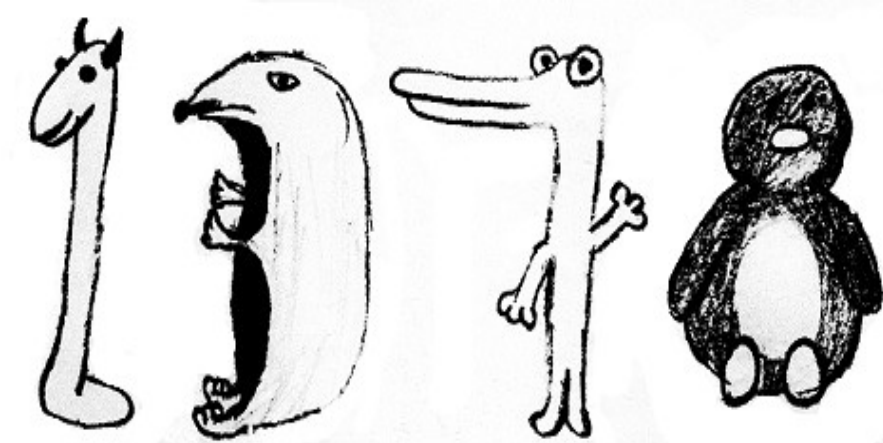input
standard input
output
standard output

There exists an island called Arpa's land, some beautiful girls live there, as ugly ones do. Mehrdad wants to become minister of Arpa's land. Arpa has prepared an exam. Exam has only one question, given n, print the last digit of $1378n$.

Mehrdad has become quite confused and wants you to help him. Please help, although it's a naive cheat.

Input

The single line of input contains one integer n ($0 \leq n \leq 10^9$).

Output

Print single integer — the last digit of $1378n$.

Examples

input

Copy

1

output

Copy

8

input

Copy

2

output

Copy

4

Note

In the first example, last digit of $1378^1 = 1378$ is 8.

In the second example, last digit of $1378^2 = 1378 \cdot 1378 = 1898884$ is 4.