

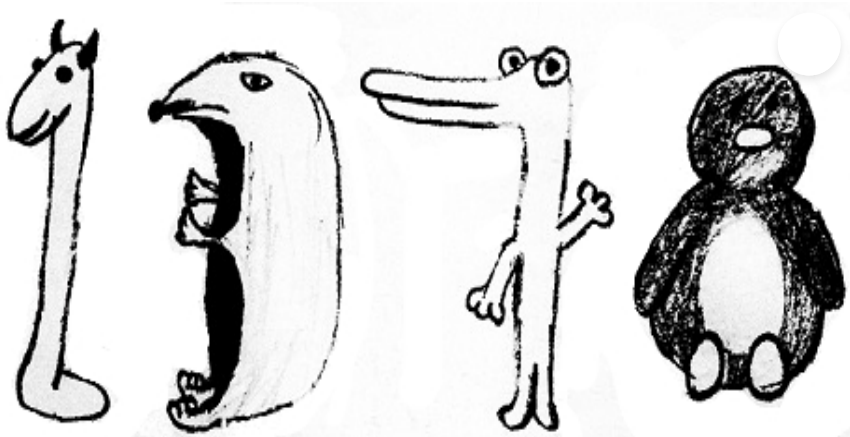
B. Arpa’s hard exam and Mehrdad’s naive cheat

time limit per test: 1 second

memory limit per test: 256 megabytes

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 1378^n .



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 1378^n .

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.

Assiut University Training -

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→ About Group



ICPC Assiut

community

[Group website](#)

→ Group Contests

- Sheet #10 (General Hard)
- Sheet #9 (General medium)
- Sheet #8 (General easy)
- Sheet #7 (Recursion)
- Sheet #6 (Math - Geometry)
- Sheet #5 (Functions)
- Sheet #4 (Strings)
- Contest #3.1
- Sheet #3 (Arrays)
- Contest #2
- Sheet #2 (Loops)
- Contest #1
- Sheet #1 (Data type - Conditions)

Sheet #9 (General medium).

Finished

Practice



→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the [link](#).

→ Virtual participation