

Come on, it is just a power of two!

This problem statement will not bore you down. You will be given a power of two. Just output the last digit of the number. Easy, right?

Input

There are multiple test cases. Each test case is represented in a single line. A test case consists of a single integer e ($0 \leq e \leq 9999999999$), the power of two.

Output

For each test case, print in a single line its answer. That is, the last digit of the number 2^e .

Example

Input:

0

1

2

3

4

Output:

1

2

4

8

6