Problem AA. N Factorial (Here N <= 10^18)

Time Limit 1000 ms
Mem Limit 524288 kB

I like short descriptions and I think you so too.

Let's say you have a number, N. Now try to find the last four digits of N!.

Actually It’s too easy.

I think you know that `$ N! = (1 \times 2 \times 3 \times ... \times N) $`.

Input

The input begins with a single integer indicating the number of test cases **T** ($1 \le T \le 100$). Each of the following test cases consists of a number **N** ($0 \le N \le 1018$).

Output

For each test case output the last four digits of N factorial (N!).

If N! is less than 4 digits don’t forget to add 0s to left.

Sample

Input	Output
4 1 2 3 7	0001 0002 0006 5040