A - In Memoriam Clive Sinclair

Context

Just two weeks ago, on September 16, 2021, Clive Sinclair passed away at his London home. Who was Clive Sinclair? He was one of the greatest pioneers in microcomputing. In the times when computers were huge machines only accessible for the biggest companies in the world, he created a new computer ready for all budgets and with the size of a large calculator: the Spectrum.

It was an 8-bit computer, with 48 Kbytes of RAM and a processor at 4 Mhz. In Spain, the ZX Spectrum was the most popular microcomputer in the 1980s, and the first computer ever used by a whole generation of young people who had never seen before anything with microchips inside. Among them, the setter of this problem.

The Problem

Clive Sinclair produced previous versions to the ZX Spectrum with 16 Kbytes, 8 Kbytes and even a first version with only 1 Kbyte of RAM!

But you might be wondering, how many different programs can be written in a computer with only 1 Kbyte? Not too many?

In this problem, given the number of Kbytes of a computer, you have to calculate the total number of possible different programs that can be written (even if they are non-sense, erroneous of useless programs). For example, if a computer only has 1 byte of memory, we can write 256 different programs in it. Since the result can be very big, you have to write the output modulo 1000007.

The Input

The input contains several test cases. The first line of the input indicates the number of test cases.

For each test case, there is a single line with an integer number, between 1 and 200000, indicating the number of Kbytes of RAM memory. Remember that 1 Kbyte is 1024 bytes.

The Output

For each test case, you have to output a single line with the number of different programs that can be written, modulo 1000007.

Sample Input

```
3
1
8
48
```

Sample Output

```
543862
6115
926180
```

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