

```
(function() { var po = document.createElement('script'); po.type = 'text/javascript'; po.async = true;
po.src = 'https://apis.google.com/js/plusone.js'; var s =
document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(po, s); })();
```

## SPOJ Problem Set (classical)

### 11560. A Summatory

#### Problem code: PUCMM210

$f(n)$  is defined as:  $f(n) = 1^3 + 2^3 + 3^3 + \dots + n^3$ , so it is the sum of the cubes of all natural numbers up to  $n$ .

In this problem you are about to compute,

$$f(1) + f(2) + f(3) + \dots + f(n)$$

#### Input

The first line is an integer  $T$  ( $1 \leq T \leq 100,000$ ), denoting the number of test cases. Then,  $T$  test cases follow.

For each test case, there is an integer  $n$  ( $1 \leq n \leq 1,000,000$ ) written in one line.

#### Output

For each test case output the result of the summatory function described above.

Since this number could be very large, output the answer modulo 1,000,000,003.

#### Example

**Input :** 32103**Output :** 10794246

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Added by: Olson Ortiz

Date: 2012-05-24

Time limit: 1s-4s

Source limit: 50000B

Languages: All

Resource: Used in 2nd dominican ACM-ICPC Warm Up 2012 Competition in PUCMM