



Summing the N series



by shashank21j

Problem

Submissions

Leaderboard

Discussions

Editorial

Topics

[Mandarin](#) | [Russian](#) | [Japanese](#)

You are given a sequence whose n^{th} term is

$$T_n = n^2 - (n - 1)^2$$

You have to evaluate the series

$$S_n = T_1 + T_2 + T_3 + \dots + T_n$$

Find $S_n \bmod (10^9 + 7)$.

Input Format

The first line of input contains T , the number of test cases.
Each test case consists of one line containing a single integer n .

Constraints

- $1 \leq T \leq 10$
- $1 \leq n \leq 10^{16}$

Output Format

For each test case, print the required answer in a line.

Sample Input 0

```
2
2
1
```

Sample Output 0

```
4
1
```

Explanation 0

Case 1: We have $4 = 1 + 3$

Case 2: We have $1 = 1$

[f](#) [t](#) [in](#)

Submissions: 8980

Max Score: 20

Difficulty: Medium

Rate This Challenge:

☆☆☆☆☆

Need Help?

[Closed Form](#)[More](#)

Current Buffer (saved locally, editable)

C



```
1 #include <stdio.h>
2 #include <string.h>
3 #include <math.h>
4 #include <stdlib.h>
```

```
5
6 ▼ int main() {
7
8     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
9     return 0;
10 }
11
```

Line: 1 Col: 1

[Upload Code as File](#)[Test against custom input](#)[Run Code](#)[Submit Code](#)

Copyright © 2017 HackerRank. All Rights Reserved

Join us on IRC at [#hackerrank](#) on freenode for hugs or bugs.

[Contest Calendar](#) | [Interview Prep](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)