

simple calculation

the problem statements are very easy just compute the value of x given the value of n .

$$x = \sum_{k=1}^n k \binom{n}{k}$$

$$\binom{n}{k} = \frac{n!}{k! (n-k)!}$$

$$n! = n * (n-1) * (n-2) * (n-3) * \dots * (3) * (2) * (1)$$

Input

the first line will contains T the number of test cases , the following T lines will contain the value of n .

$$1 \leq T \leq 10^5$$

$$1 \leq n < 10^7$$

Output

for every n print the value of $x \% 10^9+7$.

Example

Input:

5
1
5
10
15
33

Output:

1
80
5120
245760
733919781