Catalan Powered

This one is pretty simple! Given ‘n’, evaluate n^C(n).

C(n) = (2n)!/(n!*n!*(n+1))

Since the answer can be very large, output it modulo 10^9+7.

Input

First line contains T, the no. of test cases.

Next T lines contain one integer per line, ‘n’.

Output

Output T lines, each for a single test case, containing the required output.

Constraints

0<T<=100

1<=n<=10^5

Example

Input:

2

2

4

Output:
4

268435456