

H	Halting Zero Permutation	
	Time Limit (seconds)	1
	Memory Limit (MB)	256

A **permutation of size m** is a sequence of m positive integers containing each number from 1 to m exactly once. For example, $[1,4,5,3,2]$ is a permutation of size 5, while $[1,1,4,3,5]$ and $[1,6,2,3,4]$ are not.

For an even-length sequence $[A_1, A_2, \dots, A_{2t}]$, we define its power-product value ($\Lambda(A)$) as the product of terms obtained by taking each consecutive pair (A_{2i-1}, A_{2i}) , raising the first element to the power of the second, and multiplying all such results together. Formally,

For example, if $A = (3,2,5,6,4,1)$, then $\Lambda(A) = 3^2 \cdot 5^6 \cdot 4^1 = 562500$

Next, we define a halting zero value of a number as equal to how many trailing zeros an integer has. For a positive integer x , let the halting zero function $\mathcal{U}_0(x)$ be the number of zeros at the end of its decimal representation. Formally:

$$\mathcal{U}_0(x) = \max\{k \in \mathbb{Z}_{\geq 0} : 10^k | x\}.$$

For example, $\mathcal{U}_0(12000) = 3, \mathcal{U}_0(907) = 0$

Your task is to find $\max_P \mathcal{U}_0(\Lambda(P))$ when P is a permutation of size $2N$. Because the answer may be extremely large, output the result modulo $10^9 + 7$.

INPUT

The first line contains a single integer T — the number of test cases. ($1 \leq T \leq 1000$)
Each of the next T lines contains a single integer N . ($1 \leq N \leq 10^{12}$)

OUTPUT

For each test case, output a single integer — the maximum value of $\mathcal{U}_0(\Lambda(P))$ modulo $10^9 + 7$.

EXAMPLE

INPUT	OUTPUT
4	0
2	6
3	17
5	142
13	

NOTES

For $N=3$: Let $P=(5,6,4,3,2,1)$, then $U_0(\Lambda(P)) = U_0(56 \cdot 43 \cdot 21) = U_0(2,000,000) = 6$, which is the maximum value.

For $N=5$: Let $P=(4,2,3,6,5,9,1,7,10,8)$, then $U_0(\Lambda(P)) = U_0(4^2 \cdot 3^6 \cdot 5^9 \cdot 1^7 \cdot 10^8) = U_0(2,332,800,000,000,000,000,000) = 17$, which is the maximum value.