Alex and Queries

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	64 megabytes

Initially Mark has an array of size N which he got for his birthday. One evening his friend Alex came over to his place and they decided to play a game with the array. Alex is going to ask Q queries and for each query q_i in form of $[L, R]$, Mark has to answer product of all magical numbers within the range of $[L, R]$ of the array.
Magical Number:A number a_i is Magical number if the sum of all digits of a_i is prime number.
As the answer could be really large print the answer module $10^9 + 7$

Input

The first line contains $N(1 \leq N \leq 10^5)$ and $Q(1 \leq Q \leq 10^5)$, the number of elements and the number of queries respectively.
The next line contains N space separated elements $a_1, a_2, ..., a_N(1 \leq a_i \leq 10^9)$.
The next Q lines contain 2 space separated integers L and $R(1 \leq L, R \leq N)$.

Output

For each query print the product of all magical numbers modulo $10^9 + 7$

Example

standard input	standard output
5 3 1 2 3 4 5 1 1 2 4 1 5	1 6 30