3304 - Super Pow

Description

Alice and Bob was talking about factorials and Alice, like always, proposed to Bob one interesting test. She said: "I go to give you thee numbers, a, b and c, and you will do this operation: first, you will calculate a!, b! and c!, after this you will calculate b! ^ c! and then, you will take this result (called d) and will calculate a! ^ d". Bob, thinking that this operation was small and easy, started trying with a=2, b=3 and c=2, he calculated a!, b! and c! that are 2, 6 and 2. Then, he calculated 6^2 = 36, but when he was trying to calculate 2^36, he realized that was very big this number, so he want your help to find this result.

Input specification

The first line contain a single number t that is the test cases (1 <= t <= 10^5). The next t lines contain three numbers, a, b and c, separated by a single space (0 <= a, b, c <= 10^6).

Output specification

For each test in the input, you will give the result of the operation described above modulo 1000000007.

Sample input

```
1
2 3 2
```

Sample output

```
719476260
```

Hint(s)

The operation, mathematically speaking is a! ^ (b! ^ c!).

Source Isaac Vega Rodríguez

Added by	**isaacvr**
Addition date	2015-06-03
Time limit (ms)	0
Test limit (ms)	0
Memory limit (kb)	0
Output limit (mb)	64
Size limit (bytes)	0
Enabled languages	Bash C C# C++ C++11 Java JavaScript-NodeJS Pascal Perl PHP Prolog Python Ruby Text