Problem D. Three Different Numbers

Time limit	2013 ms
Code length Limit	50000 B
OS	Linux

This is probably the simplest problem ever. You just need to count the number of ordered triples of different numbers (X_1, X_2, X_3), where X_i could be any positive integer from 1 to N_i, inclusive ($i = 1, 2, 3$).

No, wait. I forgot to mention that numbers N_1, N_2, N_3 could be up to 10^{18}. Well, in any case it is still quite simple :)

By the way, because of this the answer could be quite large. Hence you should output it modulo $10^9 + 7$. That is you need to find the remainder of the division of the number of required triples by $10^9 + 7$.

Input

The first line of the input contains an integer T denoting the number of test cases. The description of T test cases follows. The only line of each test case contains three space-separated integers N_1, N_2, N_3.

Output

For each test case, output a single line containing the number of required triples modulo $10^9 + 7$.

Constraints

- $1 \le T \le 1000$
- $1 \le N_i \le 10^{18}$

Sample 1

Input	Output
5 3 3 3 2 4 2 1 2 3 25 12 2012 1 1 2013	6 4 1 578880 0

Example case 1. We have the following triples composed of different numbers up to 3:
(1, 2, 3)
(1, 3, 2)
(2, 1, 3)
(2, 3, 1)
(3, 1, 2)
(3, 2, 1)

Example case 2. Here the triples are:
(1, 3, 2)
(1, 4, 2)
(2, 3, 1)
(2, 4, 1)

Example case 3. Here the only triple is (1, 2, 3).

Example case 4. Merry Christmas!

Example case 5. ... and Happy New Year! By the way here the answer is zero since the only choice for $\mathbf{X_1}$ and for is $\mathbf{X_2}$ is 1, so any such triple will have equal numbers.