



Problem F

Monkey Business

Time Allowed: 120 seconds

The School of Food Sciences is running an experiment to study the effect of a healthy diet on the behaviour of monkeys. Each day the monkeys are separated into **G** groups. Each group has one or more monkeys and each group is given a single daily serving of fruits and vegetables according to the following rules:

- each monkey receives no more than one vegetable,
- each monkey receives the same number of fruits as the rest of monkeys in its group (otherwise they will go bananas),
- only one type of fruit and only one type of vegetable may be made available to monkeys in the same group,
- no two groups receive common fruit or vegetables,
- the number of vegetables received by a group is strictly less than the number of its monkeys, and
- each group receives no more than **M** fruits plus vegetables.

The project has a daily budget to purchase **B** fruits and vegetables, which must be completely spent, and $B \leq 100 * M$. All fruits and vegetables have the same price. All purchased fruits and vegetables must be fed to the monkeys.

For 2 groups, of 3 and 4 monkeys, there are 6 different ways to feed them on a budget of 5 with the condition that each group may have no more than 5 fruits plus vegetables.

Fruit #1	3	3	0	3	0	0
Vegetable #1	2	0	2	1	1	0
Fruit #2	0	0	0	0	4	4
Vegetable #2	0	2	3	1	0	1

Your task, as the IT member, is to write a program to compute the number of different ways to feed the monkeys.

Input

The input starts with an integer **C**, on a line by itself, that represents the number of test cases. $1 \leq C \leq 100$. Each test case consists of three integers **B**, **G** and **M** on a line by themselves. **B** is the budget of the day, **G** is the number of groups, and **M** is the maximum number of fruits plus vegetables that any group may receive. $1 \leq B \leq 10,000,000$, and $1 \leq G, M \leq 100,000$.

Output

For each test case, print the number of different ways to feed the monkeys as an integer, modulo the prime number 1000,000,007.

Sample Input	Output for the Sample Input
3	6
5 2 5	2
5 2 3	1
4 1 5	