**Repeating Number**

A natural number which is greater than 10 and all the digits of it are the same is called ‘repeating number’. For instance, 88, 2222, 11111, 555555555555, and 9999999999999999 are all repeating numbers. To represent a big repeating number efficiently it can be denoted in the form of , where represents a repeating digit and the number of digits. For example, 777777 can be simply represented as 7(6).

Bob has received a home work related to addition from school which can be stated as follows.

Given five natural numbers (let them be , ,, , and in this order), consider an infinite sequence , , , , , , … . is defined from this infinite sequence as , i.e., is the sum all the numbers from to .

The home work is as follows. Given 5 natural numbers, make a program which finds the smallest and , where is a repeating number, from the infinite sequence obtained by the 5 numbers. You are to make the same program Bob has to do.

[Input]

The first line of the input file contains a number T which indicates the number of test cases. Note that T ≤ 300. 5 natural numbers , , , , are given in each line for each test case. You can assume that a repeating number always exists for all the test cases.

Input consists of two sets:

* Set 1: For every , .
* Set 2: For every , .

[Output]

For each test case, find the first such that is a repeating number and print the remainder of divided by 1,000,000,007 and in a line as shown in the following samples. Two printed numbers should be separated by a blank.

[Sample]

Input

|  |
| --- |
| 4  21 26 53 34 88  41 15 20 74 22  14 57 57 64 90  911 267 768 382 458 |

Output

|  |
| --- |
| 4 2(3)  18 6(3)  603427900 7(17)  276353650 4(67) |