2. Modular Linear Equations

Find the smallest number *'a'* which when divided by d_0 , d_1 , … d_{n-1} leave the remainders r_0 , r_1 , … r_{n-1} respectively, using the Chinese Remainder Theorem.

Eg: Find the smallest number which when divided by 5 and 13 leave the remainders 2 and 3 respectively.
This can be modeled as the following modular linear equations,
a ≡ 2 (mod 5)
a ≡ 3 (mod 13)
The solution to these equations is a = 42.

Input:
The first line contains *n*, the number of equations
The next *n* lines contain the divisors and their corresponding remainders
1<n<100
1<d<1000
0<=r<=1000

Output:
Print the value of *'a' modulo* $10^9 + 7$

Example 1:

Input:	**Output:**
2 5 2 13 3	42

Example 2:

Input:	**Output:**
3 9 1 8 2 7 3	10

Example 3:

Input:	**Output:**
3 3 2 5 3 7 2	23