

Chinese Remainder Theorem implementation

Code computes for every set of integers a_i , b_i and set of moduli m_i a unique integer x , such that $ax \equiv b_i \pmod{m_i}$ for $i = 1, 2, 3, \dots, k$. The code supports big integers too.

The following conditions must be met:

- All m_i must be greater than 1. They may or may not be pairwise relatively prime.

Input

- First line contains the number of equations k .
- Next K lines : Three inputs a_i , b_i and m_i respectively.

Output

The output contains x , the solution set of all the input equations in the form $x = p \pmod{q}$. Output on the terminal.

Files:

- input.txt - input file
- SNS_CRT.py - code for the CRT Algorithm

Just run the python file on any python interpreter, code will get executed

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