



Discrete math

Assignment 4

Submitted by

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1-procedure Chinese(A_1, A_2, \dots :prime
positive integers; B_1, B_2, \dots, B_n :integers)

2- $a := 1$

3-for $i := 1$ to n

4- $a := a \cdot A_i$

5-for $i := 1$ to n

6- $A_k := a / A_i$

7- $y_k := (A_i^{-1}) \bmod A_i$

8- $x := 0$

9-for $i := 1$ to n

10- $x := x + B_i \cdot A_i \cdot y_i$

11-while $x \geq a$

12- $x := x - a$

13-return x {the smallest solution to the
system $x \bmod A_i = B_i$ $i = 1, 2, \dots, n$ }

