**Problem F**

**Inverse Affine Transform**

Input File: *pf.in*

Time Limit: 3 *seconds*

Let *m* be a positive integer, under a modular arithmetic, an affine transform   
on the set *S* = {0,1,2,…,m-1} can be defined as

*y* ≡ *ax*+*b* *mod m* (1)

Some permutations on an integer set *S* could be implemented based on the  
above affine transform with parameters *a* and *m* being relatively prime, that  
is, their greatest common divisor gcd(a,m) = 1. If gcd(a, m) = 1, the inverse  
transform exists which is also an affine transform, say,

*x* ≡ *cy+d* *mod m* (2)

This problem asks you to write a program to dectect and compute the  
inverse transform of an affine transform with the given parameters m, a, b.

**Input File Format**The first line of the input file always contains one integer *K* indicating the  
number of test cases to come. Each test data set consists of a line of three  
positive integers *m*, *a*, *b*, respectively. Note that 3 ≦ *K* ≦ 5 and *m* ≦　220 =   
10485676 in this problem.

**Output Format**

*K* lines, each line consist of “No inverse, gcd(a,m)=” followed by the value  
*gcd*(*a*,*m*) if *gcd*(*a*,*m*) > 1 or the values of c and d, where 0 < *c*, *d* < *m*, if  
*gcd*(*a*,*m*) = 1

**Sample Input**

5

5 2 1

16 6 5

262144 13131 128

1048576 2004 8000

1048576 301 100

**Output for the Sample Input**

3 2

No inverse, gcd(a,m)=2

15971 52864

No inverse, gcd(a,m)=4

456357 501644