**Advanced GCD**

Varun explained its friend Sanchit the algorithm of Euclides to calculate the GCD of two numbers. Then Sanchit implements the algorithm

int gcd(int a, int b)

{

if (b==0)

return a;

else

return gcd(b,a%b);

}

and challenges to Varun to calculate gcd of two integers, one is a little integer and other integer has 250 digits.

Your task is to help Varun an efficient code for the challenge of Sanchit.

#include<iostream>

using namespace std;

int gcd(int a,int b){

if(b==0)

return a;

gcd(b,a%b);

}

int main(){

int testcase;

cin>>testcase;

while(testcase--)

{

int a;

int k=0;

cin>>a;

string b;

cin>>b;

if(a==0)

cout<<b<<endl;

else{

for(int i=0;i<b.length();i++)

{

k =(k\*10+(b[i]-int('0')))%a;

//cout<<k<<" ";

}

// cout<<endl<<k<<endl;

int p=gcd(a,k);

cout<<p<<endl;

}

}

return 0;

}