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#include <iostream>
using namespace std;
int gcd(int r1,int r2)
{
    int t,q, rem;
    int a =r1;
    int b= r2;
    while(r2>0)
    {
        q = r1/r2;
        rem = r1 - q*r2;
        r1 = r2;
        r2 = rem;
    }
    return r1;
}
int inversem(int r1,int r2)
{
    int t,q, rem;
    int t1 =0;
    int t2= 1;
    int a=r1;
    int b=r2;
    while(r2>0)
    {
        q = r1/r2;
        rem = r1 - q*r2;
        r1 = r2;
        r2 = rem;
        t = t1 - q*t2;
        t1 = t2;
        t2 = t;
    }
    if(r1 == 1)
    {
        if(t1>0)
        {
            return t1;
        }

        else
        {
            t1 = t1 + a;
            return t1;
        }
    }
    return 0;
}
int main()
{
    int list1[] = {5,10,15};
    int list2[] = {1,1,3};
    int res,M =1;
    int sum=0;
    int Marr[3],Minv[3];
    cout<<"VAIBHAV MEHAR || ROLL NO: 58 || BATCH : B2"<<endl;

    cout<<"======"<<endl;

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for(int i=0;i<2;i++)
{
    res = gcd(list1[i],list1[i+1]);
    cout<<"GCD( "<<list1[i]<<","<<list1[i+1]<<") : "<<res<<endl;
}
for(int i=0;i<3;i++)
{
    M = M*list1[i];
}
cout<<"Value of M : "<<M<<endl;
for(int i=0;i<3;i++)
{
    Marr[i] = M/list1[i] ;
    cout<<"M"<<i<<" : "<<Marr[i]<<endl;
}
sum =0;
for(int i=0;i<3;i++)
{
    Minv[i] = inversem(list1[i],Marr[i]);
    cout<<"M-"<<i<<" : "<<Minv[i]<<endl;
    sum = sum + (Minv[i]*Marr[i]*list2[i]);
}
int flag =0;
for(int i=0;i<3;i++)
{
    if(Minv[i]<1)
    {
        flag =1;
    }
}
if(flag==0)
{
    cout<<sum%M<<endl;
}
else
{
    cout<<"Not Possible"<<endl;
}

cout<<"======"<<endl;
return 0;
}

```