1.PROBLEM 1

#include <cmath>

#include <cstdio>

#include <vector>

#include <iostream>

#include <algorithm>

#include <bits/stdc++.h>

using namespace std;

string maximizeNumber(string N, long long int M)

{

long long int i,j;

sort(N.begin(), N.end());

for ( i = 0; i < N.size(); i++)

{

for ( j = i + 1; j < N.size(); j++)

{

string t = N;

swap(t[j], t[i]);

sort(t.begin() + i + 1, t.end());

if (stoll(t) > stoll(N) && stoll(t) <= M)

swap(N[i], N[j]);

}

}

return N;

}

int main()

{

string N;

long long int M;

cin>>N>>M;

cout << maximizeNumber(N, M) << endl;

return 0;

}

#### 2.PROBLEM 2

#### #include <cmath>

#### #include <cstdio>

#### #include <vector>

#### #include <iostream>

#### #include <algorithm>

#### using namespace std;

#### int main() {

#### int t;

#### cin>>t;

#### for(int i=0;i<t;i++)

#### {

#### int b,p,f;

#### int x,y,z,ans;

#### cin>>b>>p>>f;

#### int h,c;

#### cin>>h>>c;

#### if(b==2)

#### cout<<std::max(h,c)<<endl;

#### else if(b<2)

#### cout<<0<<endl;

#### else{

#### x=std::max(p,f);

#### int w=std::min(p,f);

#### y=(p+f);

#### z=b/2;

#### if(y<z)

#### {

#### ans=(x\*std::max(h,c))+((y-x)\*std::min(h,c));

#### cout<<ans<<endl;

#### }

#### else if(b==p==f)

#### {

#### ans=z\*std::max(h,c);

#### cout<<ans<<endl;

#### 

#### }

#### else if(p==f && p>=z)

#### {

#### ans=z\*std::max(h,c);

#### cout<<ans<<endl;

#### }

#### else

#### {

#### ans=(std::min(p,f)\*std::max(h,c))+((z-w)\*std::min(h,c));

#### cout<<ans<<endl;

#### }

#### }

#### 

#### }

#### return 0;

#### }

3. PROBLEM 3(little panda power)

#include<iostream>

#include <bits/stdc++.h>

using namespace std;

long long po(long long a,long long b,long long x)

{

long long ans=1; a=a%x;

while(b>0)

{

if(b&1) ans=(ans\*a)%x; b=b>>1; a=(a\*a)%x; } return ans; }

int main() {

bool prime[1000001];

memset(prime,'1',sizeof(prime)); for(int i=2;i\*i<=1000001;i++) { if(prime[i]) { for(int j=(i\*i);j<1000001;j+=i) prime[j]=0; } }

int q; cin>>q; while(q--) { long long a,b,x;

cin>>a>>b>>x;

int aa=x;

vector<int>v;

int i=2;

long long ans=1;

if(b<0)

{

if(!prime[a])

{

while(aa>1)

{

int ab=aa;

while(aa%i==0)

aa/=i;

if(aa!=ab)

v.push\_back(i);

i++;

if(aa)

{

while(prime[i]==0)

{

i++;

}

}

}

ans=x;

for(int i=0;i<v.size();i++)

{

ans=(ans\*(v[i]-1))/v[i];

}

}

else if(a>2)

{

ans=x-1;

}

while(b<0)

b+=ans;

cout<<po(a,b,x)<<endl;

}

else

{

cout<<po(a,b,x)<<endl;

}

}

}

4. PROBLEM 3(STRING SIMILARITY)

**#include <iostream>**

**#include <string>**

**#include <vector>**

**using namespace std;**

**int main()**

**{**

**int t;**

**cin>>t;**

**while(t--)**

**{**

**string s;**

**long m=0,i=0,c=0,sum=0;**

**cin>>s;**

**for(long k=0;k<s.length();k++)**

**{**

**for(long j=0+m;j<s.length();j++)**

**{**

**//cout<<"j is"<<j<<endl;**

**if(s[i]==s[j])**

**{**

**c++;**

**i++;**

**//cout<<c<<endl;**

**}**

**else**

**break;**

**}**

**// sum=sum+c;**

**i=0;**

**m++;**

**}**

**cout<<c<<endl;**

**}**

**}**