Algoritmii PACIIIII

1.Suma,prod..

```
#include <iostream>

using namespace std;

inta,b;

int main()

{

cin>>a>>b;

cout<<(a+b)<<" "<<(a-b)<<" "<<(a*b)<<" "<<(a/b)<<" "<<(a%b) <<endl;

   return 0;

}
```

→Click sau tap samergi direct la cuprins←

2.Coordonate A si B + coordonatelemijlocului

```
#include <fstream>
#include<math.h>
using namespace std;
ifstream f("date.in");
ofstream g("date.out");
float xa,ya,xb,yb,xm,ym,l;
int main()
{
   f>>xa>>xb>>xb>>yb;
   l=sqrt(pow(xb-xa,2)+pow(yb-ya,2));
xm=(xa+xb)/2;
ym=(ya+yb)/2;
   g<<xm<<" "<<ym<<endl<<l;
f.close();
g.close();
   return 0;
}
```

→Click sau tap samergi direct la cuprins←

3.Ecuatia de gradul I

```
#include <fstream>

using namespace std;
ifstream f("ecutie.in");
ofstream g("ecuatie.out");
float a,b;

int main()
{
   f>>a>>b;
   if(a==0)g<<"Inf.sol";
   else
      g<<"Impos";
   else g<<(-b/a);

   return 0;
}
```

→Click sau tap samergi direct la cuprins←

4.Maximul intre 4 numere

```
#include <iostream>
using namespace std;
inta,b,c,d,maxi;
int main()
{
cin>>a>>b>>c>>d;
   maxi=a;
   if(b>maxi)maxi=b;
   if(c>maxi)maxi=c;
   if(d>maxi)maxi=d;
cout<<maxi<<"\n";
   return 0;
}
```

→Click sau tap samergi direct la cuprins←

5.Ecuatia de gradul 2

```
#include <iostream>
#include<math.h>
using namespace std;
float a,b,c,d;
int main()
{
cin>>a>>b>>c;
   if(b==0)
      if(c==0)
cout<<"inf sol";
          else
cout<<"impos";
          else
cout<<-(b/a);
       {
          d=pow(b,2)-4*(a*c);
          if(d>0)cout<<(-b+sqrt(d))/(2*a)<<" "<<(-b-sqrt(d))/2*a;
             if(d==0)
cout<<(-b/(2*a));
                if(d<0) cout<<"nr complex"<<"\n";
 }
return 0;}
```

→Click sau tap samergi direct la cuprins←

6.Switch-ul pacii

```
#include <iostream>

using namespace std;

inta,b;

char op;

int main()

{

cin>>a>>b;

   do{

      cout<<"1.ADUNARE[+]"<<endl<<"2.SCADERE[-
]"<<endl<<"3.INMULTIRE[*]"<<endl<<"4.CAT[/]"<<endl<<"5.REST[%]"<<endl
<<"6.IESIRE[x];

cout<<"OPTIUNEA:";cin>>op;

      switch (op);

   }

   {

   case'+'cout<<(a+b)<<endl;break;

   case'-'cout<<(a-b)<<endl;break;

   case'*'cout<<(a*b)<<endl;break;

   case'/'cout<<(a/b)<<endl;break;

   case'%'cout<<(a%b)<<endl;break;

default:cout<<"alege+,-,*,/,%,x";

}return 0; }
```

→Click sau tap samergi direct la cuprins←

7.Aria coord.

```
#include <iostream>
#include <math.h>
using namespace std;
float xx1,yy1,xx2,yy2,xx3,yy3,a,b,c,aria,p;
int main()
{
cin>>xx1>>yy1>>xx2>>yy2>>xx3>>yy3;
   a=sqrt(pow(xx1-xx2,2)+pow(yy1-yy2,2));
   b=sqrt(pow(xx1-xx3,2)+pow(yy1-yy3,2));
   c=sqrt(pow(xx2-xx3,2)+pow(yy2-yy3,2));
   p=(a+b+c)/2;
   aria=sqrt(p*(p-a)*(p-b)*(p-c));
cout<<aria;
   return 0;
}
```

→Click sau tap samergi direct la cuprins←

8.Maximul dintre N numere

```
#include <fstream>
using namespace std;
ifstream f("maxim.in");
ofstream g("maxim.out");
intn,x,m,i;
int main()
{
   f>>n>>x;
   m=x;
   for(i=2;i<=n;i++)
   {
      f>>x;
      if(x>m)m=x;
   }
   g<<m;
f.close();
g.close();
   return 0;
}
```

→Click sau tap samergi direct la cuprins←

9.N numereperfecte

```
#include <iostream>
using namespace std;
unsigned x,n,i,s,d;
int main()
{
cin>>n;
   for(i=1;i<=n;i++)
   {
cin>>x;
      s=1;
      for(d=2;d<=x/2;d++)
         if(x%d==0)s=s+d;
      if(s==x)cout<<x<<" ";
   }
   return 0;
}
```

→Click sau tap samergi direct la cuprins←

10.numere prime din intervalula,b

```
#include <fstream>
using namespace std;
ifstream f("date.in");
ofstream g("prime.out");
unsigned i,a,b,ok,aux,d;
int main()
{
   f>>a>>b;
   if(a>b) {aux=a;a=b;b=aux;}
      for(i=a;i<=b;i++)
   {
      ok=1;
      for(d=2;d<=i/2&&ok;d++)
         if(i%d==0)ok=0;
      if(ok==1) g<<i<<'\n';
   }
f.close();
g.close();
 return 0; }
```

→Click sau tap samergi direct la cuprins←

11.Sirul luiFibo

```
#include <iostream>
using namespace std;
unsigned f,n,a,b,i;
int main()
{
cin>>n;
   if(n==1)cout<<1;
   else cout<<1<<" "<<1<<" ";
   a=1;b=1;
   for(i=3;i<=n;i++)
   {
      f=a+b;
cout<<f<<" ";
      a=b;
      b=f;
   }


   return 0;
}
```

→Click sau tap samergi direct la cuprins←

12.NUmere prime gemene

```
#include <fstream>
using namespace std;
ifstream f("date.in");
ofstream g("date.out");
unsigned long x=3,d;
unsigned n,k=0,ok,y;
int main()
{
   f>>n;
   while(k<n)
   {
      y=x+2;
      ok=1;
      for(d=2;d<=x/2&&ok;d++)
         if(x%d==0)ok=0;
      if(ok==1)
      {for(d=2;d<=y/2&&ok;d++)
         if(y%d==0)ok=0;
      if(ok==1)
      {g<<"("<<x<<","<<y<<")";
         k++ }}x++;}  return 0;}
```

→Click sau tap samergi direct la cuprins←

13.Divizorul comun la N numere

```
#include <fstream>
using namespace std;
ifstream f("date.in");
ofstream g("date.out");
inta,b,n,i;
int main()
{
   f>>n;
   f>>a;
   for(i=2;i<=n;i++)
   {
      f>>b;
      while(a!=b)
         if(a>b)a=a-b;
      else b=b-a;
   }
   g<<a;
f.close();
g.close();
   return 0;
}
```

→Click sau tap samergi direct la cuprins←

14.Fractie ireductibila

```
#include <fstream>
using namespace std;
ifstream f("date.in");
ofstream g("date.out");
unsigned x,y,a,b;
int main()
{
   f>>a>>b;
   x=a;
   y=b;
   while(a!=b)
  {if(a>b)a=a-b;
   else b=b-a;
  }
   g<<x/a<<"/"<<y/a;
f.close();
g.close();
   return 0;
}
```

→Click sau tap samergi direct la cuprins←

15.Ceva cu oglinditsinumere prime

```
#include <fstream>
using namespace std;
ifstream f("date.in");
ofstream g("date.out");
unsigned long n,d,ok,ogl,i,x;
int main()
{
   f>>n;
   for(i=2;i<=n;i++)
   {
      ok=1;
      for(d=2;d<=i/2&&ok==1;d++)
         if(i%d==0) ok=0;
      if(ok==1)
ogl=0;
      x=1;
      while(x)
      {
ogl=ogl*10+x%10;
         x=x/10;
      }
      for(d=2;d<=ogl/2&&ok==1;d++)
       {if(ogl%d==0) ok=0;}
```

```
        if(ok==1)
            {g<<i<<"\n";
            }
    }
f.close();
g.close();
    return 0;
}
```

→Click sau tap samergi direct la cuprins←