

SUBIECTUL I


(20 de puncte)

1. d
2. b
3. c
4. a
5. b

SUBIECTUL al II-lea

(40 de puncte)

1.

- a. 1 275
- b. 12345, 6543 sau 1479, 321
- c. 
- d.

citește n (număr natural, $n > 9$)

$c1 \leftarrow n \% 10$; $n \leftarrow [n/10]$; $c2 \leftarrow n \% 10$

dacă $c1 = c2$ atunci $s \leftarrow 0$

altfel

dacă $c1 > c2$ atunci $s \leftarrow 1$

altfel $s \leftarrow -1$

■

■

cât timp $(c1 - c2) * s > 0$ execută

$c1 \leftarrow n \% 10$; $n \leftarrow [n/10]$; $c2 \leftarrow n \% 10$

■

scrie s , ' ', n

```
main.cpp x
1  #include <iostream>
2  using namespace std;
3  int n, c1, c2, s;
4  int main()
5  {
6      cin >> n;
7      c1 = n % 10; n = n / 10; c2 = n % 10;
8      if (c1 == c2)
9          s = 0;
10     else
11         if (c1 > c2)
12             s = 1;
13         else
14             s = -1;
15     do
16     {
17         c1 = n % 10; n = n / 10; c2 = n % 10;
18     } while ((c1 - c2) * s > 0);
19     cout << s << " " << n;
20     return 0;
21 }
22
```

2.

struct cerc

{

int raza;

struct centru

{

int x, y;

}

} fig;

3.

```
for (p=0; p<strlen(s); p++)
    if (!(s[p]=='A' && s[p-1]!='I') && !(s[p]=='A' && s[p+1]!='I'))
        cout << s[p];
```

1.

```

int factori (int n, int m)
{
    int nr=0, i;
    i=2;
    while (n!=1&& m!=1)
    {
        if (n%i==0&& m%i==0)
        {while (n%i==0)
            n=n/i;
            while (m%i==0)
                m=m/i;
            nr++;}
        else
            while (n%i==0)
                n=n/i;
            while (m%i==0)
                m=m/i;
        i++;
    }
    return nr;
}

```

2.

```

*main.cpp X
#include <iostream>
#include <cmath>
using namespace std;
int n, a[21][21], i, j, k, l;
int main()
{
    cin>>n;
    k=n;
    for (i=0;i<n;i++)
        { k--; l=k;
        for ( j=0;j<n;j++)
            { if(i+j==n-1) a[i][j]=0;
              else if(i+j<n-1) a[i][j]=1;
              else a[i][j]=abs(l);
            }
        l--;
    }
    for(i=0;i<n;i++)
    {
        for(j=0;j<n;j++)
        {
            cout<<a[i][j]<<" ";
        }
        cout<<endl;
    }
    return 0;
}

```

3.

```

main.cpp X
#include <iostream>
#include <fstream>
using namespace std;
ifstream f("bac.txt");
int x, lpmax=0, lnmax=0, nr=0, ok=0;
int main()
{
    while(f>>x)
    {
        nr++;
        if(x<0)
        {
            ok=1;
            lnmax=nr;
        }
        if(ok==1)
            lpmax++;
    }
    if(lnmax>lpmax)
        cout<<lnmax;
    else
        cout<<lpmax;
    return 0;
}

```