

```

1 #include<fstream>
2 using namespace std;
3 ifstream f("aoc2020.in");
4 ofstream g("aoc2020.out"); // aoc20202
5 int main()
6 {
7     long long int n,x,y,p,r,q=1;
8     f>>n>>x;
9
10    p=x;
11    n--;
12
13    while(n>0)
14    {
15        f>>y;
16        p=p*y;
17
18        long long int a=x, b=y;
19        long long int r=a%b;
20        while(r)
21        {
22            a=b;
23            b=r;
24            r=a%b;
25        }
26
27        p=p/b;
28        x=p;
29        n--;
30    }
31
32    g<<p;
33    return 0;
34 }
35

```

```

1 #include <iostream>
2 using namespace std; // #2771 Covorul
3
4 int main ()
5 {
6     int n, m, cnt=0;
7     cin >> m >> n;
8     int mini=n;
9     if (mini > m)
10         mini = m;
11     cout << mini << ' ';
12
13     // se alege un covor cu dimensiunea egală cu minimul dintre lungimea și lățimea suprafeței care trebuie acoperită
14     while (n % m>0 && m % n>0)
15     {
16         if (n > m)
17         {
18             cnt += n / m;
19             n %= m;
20         }
21         else
22         {
23             cnt += m / n;
24             m %= n;
25         }
26     }
27
28     if (m % n == 0)
29         cnt+= m / n;
30     else
31         if (n % m == 0)
32             cnt += n / m;
33
34     cout << cnt;
35 }

```

```

1 #include <iostream>
2 using namespace std; // #3073 repartitie
3
4 int main()
5 {
6     int n, k, m, p, x, y, z, nr7, nr8;
7     cin >> n >> k >> m >> p;
8
9     nr7 = n * k;
10    nr8 = m * p;
11
12    int n1=nr7,n2=nr8, r;
13    while (n2)
14    {
15        r = n1 % n2;
16        n1 = n2;
17        n2 = r;
18    }
19
20    y = nr7 / n1;
21    z = nr8 / n1;
22    x = z + y;
23
24    cout<<x<<" "<<y<<" "<<z<<" "<<n1;
25    return 0;
26 }

```

```

1 #include <iostream>
2 using namespace std; // #2748 patrula3
3 int main()
4 {
5     long long d1,d2,d3,r,a,b,c,mc;
6     short int n;
7     cin >> n;
8     d1=n*4-4;
9     d2=d1-8;
10    d3=d2-8;
11    long long cd1=d1, cd2=d2, cd3=d3;
12    long long ccd1=d1;
13
14    while(cd2!=0)
15    {
16        r=cd1%cd2;
17        cd1=cd2;
18        cd2=r;
19    }
20    while(cd3!=0)
21    {
22        r=ccd1%cd3;
23        ccd1=cd3;
24        cd3=r;
25    }
26    mc=(d1*d2*d3)/(cd1*ccd1);
27    a = mc / d1;
28    b = mc / d2;
29    c = mc / d3;
30    cout<<a<<" "<<b<<" "<<c;
31    | return 0;
32 }

```

```

1 #include <iostream>
2 #include <cmath>
3 using namespace std; // #411 PrimeIntreEle1
4 int main()
5 {
6     int a,x,cx,y,cy,cnt=0,r;
7     cin>>a;
8     for(x=1;x<=a;x++)
9     {
10         for(y=x;y<=a;y++)
11         {
12             cx=x;
13             cy=y;
14             while(cy!=0)
15             {
16                 r=cx%cy;
17                 cx=cy;
18                 cy=r;
19             }
20             if(cx==1)
21                 cnt++;
22         }
23     }
24     cout<<cnt;
25 }

```

```

1 #include <iostream>
2 using namespace std; // #80 NumararePerechiPrimeIntreEle
3 int main()
4 {
5     long long a, b, cnt = 0, ca, r;
6     cin>>b;
7     while(b)
8     {
9         cin>>a;
10        ca=a;
11        if(ca)
12        {
13            while(b)
14            {
15                r = ca % b;
16                ca = b;
17                b = r;
18            }
19            if(ca==1) cnt++;
20        }
21        b=a;
22    }
23    cout<<cnt;
24    return 0;
25 }

```

```

1 #include <bits/stdc++.h>
2 using namespace std; // #3271 PerecheCMMDC
3
4 int n, a, b, a1, b1, max1, maxi;
5 int main()
6 {
7     cin >> n;
8     for(int i = 1; i <= n; ++i)
9     {
10         cin >> a >> b;
11         int ca = a, cb = b, r;
12         while(b > 0)
13         {
14             r = a % b;
15             a = b;
16             b = r;
17         }
18         if(a > maxi)
19             maxi = a, a1 = ca, b1 = cb;
20         else
21             if(a == maxi && ca + cb > max1)
22                 max1 = ca + cb, a1 = ca, b1 = cb;
23     }
24     cout << a1 << ' ' << b1;
25     return 0;
26 }

```

```

1  #include <iostream>
2  using namespace std; // #409 Oglindit4
3  int main()
4  {
5      int n,x,x1,y,r,nr=0;
6      cin >>n;
7      for(int i=0;i<n;i++)
8      {
9          cin >> x;
10         x1=x;
11         y=0;
12         while(x1>0)
13         {
14             y = y*10 + x1%10;
15             x1/=10;
16         }
17         while(y!=0)
18         {
19             r = x%y;
20             x = y;
21             y = r;
22         }
23         if(x==1) nr++;
24     }
25     cout << nr;
26     return 0;
27 }
28

```

```

1  #include <iostream>
2  using namespace std; // #410 Cmmdc2
3
4  int main()
5  {
6      int n,a,b,nr=1,p=1,i,r;
7      cin>>n;
8      int cn=n;
9      while(cn>9)
10     {
11         nr++;
12         cn=cn/10;
13     }
14     for(i=1; i<=nr/2; i++)
15         p=p*10;
16     b=n%p;
17     a=n/p;
18     if (nr%2==1)
19         a=a/10;
20     while(b)
21     {
22         r=a%b;
23         a=b;
24         b=r;
25     }
26     cout<<a;
27     return 0;
28 }
29

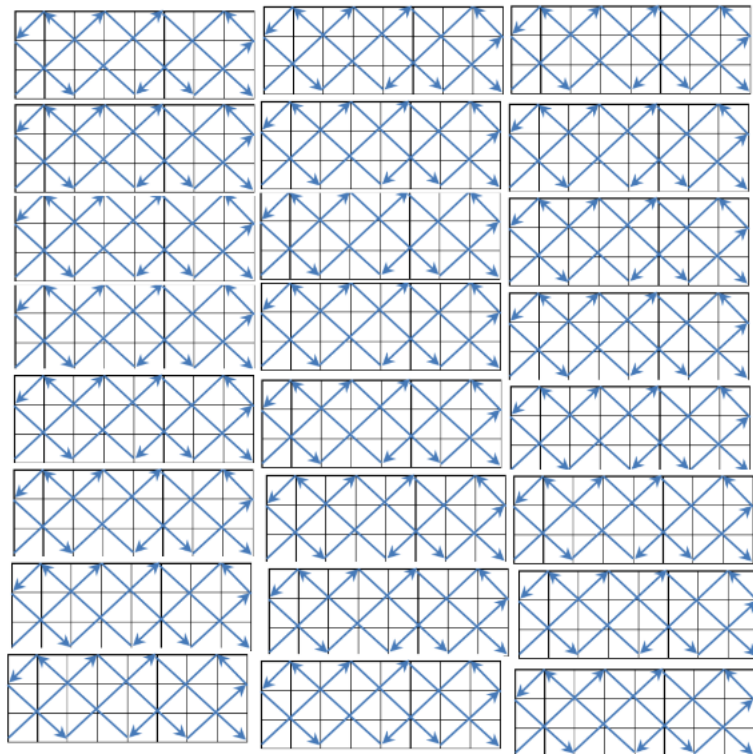
```

```

1 #include <iostream>
2 using namespace std; // #305 CmmdcN
3 int main()
4 {
5     int a, b, r, n;
6     cin >> n;
7     cin >> a >> b;
8     r = a % b;
9     while (r != 0)
10    {
11        a = b;
12        b = r;
13        r = a % b;
14    }
15    n -= 2;
16    while (n > 0)
17    {
18        cin >> a;
19        r = a % b;
20        while (r != 0)
21        {
22            a = b;
23            b = r;
24            r = a % b;
25        }
26        n--;
27    }
28    cout << b;
29    return 0;
30 }
31

```

3x8



```

1 #include <iostream>
2 using namespace std; // #2611 raza
3 int main()
4 {
5     long long int a,b,r,n,m;
6     cin >> a >> b;
7     n=a,m=b;
8     while(b!=0)
9     {
10         r=a%b;
11         a=b;
12         b=r;
13     }
14     cout<<n/a-1 + m/a-1;
15
16     return 0;
17 }

```

```

1 #include <fstream>
2 using namespace std;
3 ifstream cin ("tai.in");
4 ofstream cout ("tai.out");//#3432 Tai
5 int main ()
6 {
7     int n, v, c, maxi(0);
8     cin >> c;
9     cin >> n;
10    if (c == 1)
11    {
12        for (int i = 1; i <= n; i++)
13        {
14            cin >> v;
15
16            int d(2),ok(1);
17
18            if (v < 2)
19                ok=0;
20            if (v % 2 == 0 && v > 2)
21                ok=0;
22            for (d=3; d * d <= v; d = d + 2)
23                if (v % d == 0)
24                    ok=0;
25
26            if (ok && maxi < v)
27                maxi = v;
28        }
29        cout << maxi;
30        return 0;
31    }
32 }

```

```

32
33 if (c == 2)
34 {
35     for (int i = 1; i <= n; i++)
36     {
37         cin >> v;
38         int k(10);
39         while (v / k)
40         {
41             int p1 = v / k, p2 = v % k;
42
43             k *= 10;
44
45             int d(2), ok1(1), ok2(1);
46
47             if (p1 < 2)
48                 ok1 = 0;
49             if (p1 % 2 == 0 && p1 > 2)
50                 ok1 = 0;
51             for (d = 3; d * d <= p1; d = d + 2)
52                 if (p1 % d == 0)
53                     ok1 = 0;
54
55             if (p2 < 2)
56                 ok2 = 0;
57             if (p2 % 2 == 0 && p2 > 2)
58                 ok2 = 0;
59             for (d = 3; d * d <= p2; d = d + 2)
60                 if (p2 % d == 0)
61                     ok2 = 0;
62
63             if (ok1 && p1 > maxi)
64                 maxi = p1;
65             if (ok2 && p2 > maxi)
66                 maxi = p2;
67         }
68     }
69     cout << maxi;
70 }
71 else

```

```

71     else
72     {
73         for (int i = 1; i <= n; i++)
74         {
75             cin >> v;
76             int k(10), k1(10);
77             while (v / k)
78             {
79                 int p3 = v % k, v1 = v / k;
80
81                 k *= 10; k1 = 10;
82
83                 while (v1 / k1)
84                 {
85                     int p1 = v1 / k1, p2 = v1 % k1;
86                     k1 *= 10;
87
88                     int d(2), ok1(1), ok2(1), ok3(1);
89
90                     if (p1 < 2)
91                         ok1=0;
92                     if (p1 % 2 == 0 && p1 > 2)
93                         ok1=0;
94                     for (d=3; d * d <= p1; d = d + 2)
95                         if (p1 % d == 0)
96                             ok1=0;
97
98                     if (p2 < 2)
99                         ok2=0;
100                     if (p2 % 2 == 0 && p2 > 2)
101                         ok2=0;
102                     for (d=3; d * d <= p2; d = d + 2)
103                         if (p2 % d == 0)
104                             ok2=0;
105
106                     if (p2 % d == 0)
107                         ok2=0;
108
109                     if (p3 < 2)
110                         ok3=0;
111                     if (p3 % 2 == 0 && p3 > 2)
112                         ok3=0;
113                     for (d=3; d * d <= p3; d = d + 2)
114                         if (p3 % d == 0)
115                             ok3=0;
116
117                     if (ok1&& p1>maxi)
118                         maxi = p1;
119                     if (ok2 && p2>maxi)
120                         maxi = p2;
121                     if (ok3 && p3>maxi)
122                         maxi = p3;
123                 }
124             }
125         }
126     }
127     cout << maxi;
128 }

```