

Практическая работа 4

Задача 1

```
In [2]: A = int(input())
        B = int(input())
        if A > B:
            print(A)
        else:
            print(B)
```

```
22
2
22
```

Задача 2

```
In [3]: A = int(input())
        B = int(input())
        if A>B:
            print(1)
        elif A == B:
            print(0)
        else:
            print(2)
```

```
1
2
2
```

Задача 3

```
In [4]: A = int(input())
        B = int(input())
        C = int(input())
        if A>=B and A>=C:
            print(A)
        elif B>=A and B>=C:
            print(B)
        else:
            print(C)
```

```
1
2
3
3
```

Задача 4

```
In [5]: N = int(input())
        if N%4 == 0 and N%100 != 0:
            print('YES')
        elif N//400:
            print('YES')
        else:
            print('NO')
```

4
YES

Задача 5

```
In [6]: A = int(input())
        B = int(input())
        C = int(input())
        D = int(input())
        R=(A+B)-(C+D)
        if R > 0:
            R=R
        else:
            R=R*(-1)

        if R < 3 and R >0:
            print('YES')
        else:
            print('NO')
```

4
4
5
5
YES

Задача 6

```
In [7]: x, y = int(input()), int(input())
        if (x - 1) % (y - (x - 1)) == 0:
            print('YES')
        else:
            print('NO')
```

11
15
YES

Задача 7

```
In [10]: x, y, z, c = int(input()), int(input()), int(input()), int(input())
if (x+y)%2==0 and (z+c)%2==0:
    print('YES')
else:
    print('NO')
```

```
1
1
6
8
YES
```

Задача 8

```
In [16]: n,m,k=int(input()),int(input()),int(input())
if k < n * m and ((k % n == 0) or (k % m == 0)):
    print('YES')
else:
    print('NO')
```

```
2
5
4
YES
```

Задача 9

```
In [31]: n = int(input())
if n % 10 == 1 and n != 11:
    print(n, 'korova')
elif 2 <= n % 10 <= 4 and n // 10 != 1:
    print(n, 'korovy')
else:
    print(n, 'korov')
```

```
24
24 korovy
```

Задача 10

```
In [34]: x =int(input())
if x>0:
    print(1)
elif x<0:
    print(-1)
else:
    print(0)
```

```
19
1
```

Задача 11

```
In [41]: x1=int(input())
y1=int(input())
x2=int(input())
y2=int(input())
if (y1>0 and y2>0) or (y1<0 and y2<0):
    if (x1>0 and x2>0) or (x1<0 and x2<0):
        print('YES')
    else:
        print('NO')
else:
    print('NO')
```

```
3
3
5
6
YES
```

Задача 12

```
In [68]: x, y, z, c = int(input()), int(input()), int(input()), int(input())
if (x+y)%2==0 and (z+c)%2==0 and (x<z):
    print('YES')
else:
    print('NO')
```

```
5
5
6
4
YES
```

Задача 13

```
In [76]: a = int(input())
b = int(input())
c = int(input())
if (c**2 == a**2 + b**2) or (a**2 == b**2 + c**2) or (b**2 == a**2 + c**2):
    print("rectangular")
elif (c**2 < a**2 + b**2) or (a**2 < b**2 + c**2) or (b**2 < a**2 + c**2):
    print("acute")
elif (c**2 > a**2 + b**2) or (a**2 > b**2 + c**2) or (b**2 > a**2 + c**2):
    print("obtuse ")
else:
    print("impossible")
```

```
3
4
5
rectangular
```

Задача 14

```
In [78]: a = int(input())
b = int(input())
c = int(input())
if (a%2==0 or b%2==0 or c%2==0) and (a%2==1 or b%2==1 or c%2==1):
    print('YES')
else:
    print('NO')
```

3
4
5
YES

Задача 15

```
In [95]: a, b, c = int(input()), int(input()), int(input())
if a > b:
    a, b = b, a
if b > c:
    b, c = c, b
if a > b:
    a, b = b, a
print(a, b, c)
```

4
3
4
3 4 4

Задача 16

```
In [112]: a, b, c = int(input()), int(input()), int(input())
d=0
if a == b:
    d=d+1
if b==c:
    d=d+1
if d==2:
    print(3)
elif d==1:
    print(2)
else:
    print(0)
```

7
7
7
3

Задача 17

```
In [117]: a,b,c,d,e = int(input()),int(input()),int(input()),int(input()),int(input())
if a <= d and b <= e or a <= e and b <= d:
    print("YES")
elif c <= d and b <= e or c <= e and b <= d:
    print("YES")
elif a <= d and c <= e or a <= e and c <= d:
    print("YES")
else:
    print("NO")
```

```
3
3
3
4
4
YES
```

Задача 18

```
In [120]: A1,B1,C1 =int(input()),int(input()),int(input())
A2,B2,C2 =int(input()),int(input()),int(input())
if A1*B1*C1>A2*B2*C2:
    print('The first box is larger than the second one')
elif A1*B1*C1<A2*B2*C2:
    print('The first box is smaller than the second one')
elif A1*B1*C1==A2*B2*C2:
    print('Boxes are equal')
else:
    print('Boxes are incomparable')
```

```
2
2
3
3
2
1
The first box is larger than the second one
```

Задача 19

```
In [129]: A1,B1,C1 = int(input()),int(input()),int(input()),  
A2,B2,C2 = int(input()),int(input()),int(input()),
```

```
D1 = (A1 // A2) * (B1 // B2) * (C1 // C2)  
D2 = (A1 // A2) * (C1 // B2) * (B1 // C2)  
D3 = (B1 // A2) * (C1 // B2) * (A1 // C2)  
D4 = (B1 // A2) * (A1 // B2) * (C1 // C2)  
D5 = (C1 // A2) * (A1 // B2) * (B1 // C2)  
D6 = (C1 // A2) * (B1 // B2) * (A1 // C2)
```

```
if D1 >= D2:  
    D2 = D1  
if D3 >= D4:  
    D4 = D2  
if D5 >= D6:  
    D6 = D5
```

```
if D2 >= D4 and D2 >= D6:  
    print(D2)  
elif D4 >= D6:  
    print(D4)  
else:  
    print(D6)
```

```
7  
7  
7  
3  
3  
3  
8
```

Задача 20

```
In [144]: k = int(input())  
x = 3  
y = 5  
  
if k%x==0 or k%y==0 or k%(x+y)==0:  
    print('YES')  
else:  
    print('NO')
```

```
8  
YES
```

Задача 21

```
In [3]: a, b, c, d = int(input()), int(input()), int(input()), int(input())
        if a == 0 and b == 0:
            print('INF')
        elif a == 0 or b * c == a * d:
            print('NO')
        elif b % a == 0:
            x = -b // a
            print(x)
        else:
            print('NO')
```

```
2
-4
7
1
2
```

Задача 22

```
In [2]: k,m,n=int(input()),int(input()),int(input())
        if n<=k:
            print(int(2*m))
        elif (2*n)%k==0:
            print(int(m*((2*n)//k)))
        else:
            print(int(m*((n*2)//k+1)))
```

```
1
2
3
12
```

Задача 23


```

In [161]: l1, r1, l2 = int(input()), int(input()), int(input())
          r2, l3, r3 = int(input()), int(input()), int(input())
          if l2 > l3:
              l = l2
              r = r2
              l2 = l3
              r2 = r3
              l3 = l
              r3 = r
          if l1 > l3:
              l = l3
              r = r3
              l3 = l1
              r3 = r1
              l1 = l
              r1 = r
          if l1 > l2:
              l = l1
              r = r1
              l1 = l2
              r1 = r2
              l2 = l
              r2 = r
          f1 = r1 - l1
          f2 = r2 - l2
          f3 = r3 - l3
          g12 = l2 - r1
          g23 = l3 - r2
          if g12 <= 0 and g23 <= 0:
              print(0)
          elif g12 <= 0 and g23 >= 0:
              print(3)
          elif g12 >= 0 and g23 <= 0:
              print(1)
          elif g12 <= f3 and g23 <= f1:
              if f1 == f3:
                  print(1)
              elif f1 < f3:
                  print(1)
              else:
                  print(3)
          elif g12 <= f3:
              print(3)
          elif g23 <= f1:
              print(1)
          else:
              print(-1)

```

```

1
2
9
10
12
20
3

```

Задача 24

```

In [26]: l1, w1, h1, l2, w2, h2, lc, wc, hc = int(input()), int(input()), int(input
()), int(input()), int(input()), int(input()), int(input()), int(input()), in
t(input())
l1 = max(l1, w1)
w1 = min(l1, w1)
l2 = max(l2, w2)
w2 = min(l2, w2)
lc = max(lc, wc)
wc = min(lc, wc)
flag = True
if l1 <= lc and w1 <= wc and l2 <= lc and w2 <= wc:
    if h1 > hc or h2 > hc: #10
        print("NO")
        flag = False
if (flag and l1 <= lc and w1 <= wc):
    if (flag and l2 <= wc - w1 and w2 <= lc) or (flag and w2 <= wc - w1 and l
2 <= lc):
        print("YES")#15
        flag = False
elif (flag and l2 <= lc - l1 and w2<=wc) or (flag and w2 <= lc - l1 and l2<=w
c):
    print("YES")
    flag = False
if (flag and w1 <= lc and l1 <= wc):#20
    if (flag and l2<=wc-l1 and w2<=lc) or (flag and w2<=wc-l1 and l2<=lc):
        print("YES")
        flag = False
elif (flag and l2<=lc-w1 and w2<=wc) or (flag and w2<=lc-w1 and l2<=wc):
    print("YES")
    flag = False
if (flag and h1+h2<=hc and l1<=lc and w1<=wc and l2<=lc and w2<=wc):
    print("YES")
    flag = False
elif (flag):
    print("NO")
else:
    print("NO")

```

```

3
2
2
3
1
2
5
2
3
NO

```