

Практическая работа 4

Задача 1

```
In [1]: A=int(input())
        B=int(input())

        if A>=B:
            print(A)
        else:
            print(B)
```

```
8
5
8
```

Задача 2

```
In [2]: A=int(input())
        B=int(input())

        if A>B:
            print('1')
        elif A<B:
            print('2')
        else:
            print('0')
```

```
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 A>=C:
            print(B)
        else:
            print(C)
```

```
1
2
3
3
```

Задача 4

```
In [5]: N=int(input())

if N%4!=0:
    print('NO')
elif N%100==0:
    if N%400==0:
        print('YES')
    else:
        print('NO')
else:
    print('YES')
```

4
YES

Задача 5

```
In [17]: l1=int(input())
c1=int(input())
l2=int(input())
c2=int(input())

if (l1+1==l2 or l1-1==l2 or l1==l2) and (c1+1==c2 or c1-1==c2 or c1==c2) and
not(l1==l2 and c1==c2):
    print('YES')
else:
    print('NO')
```

4
4
5
5
YES

Задача 6

```
In [18]: x=int(input())
y=int(input())

if (x-1)%(y-(x-1))==0:
    print('YES')
else:
    print('NO')
```

2
10
NO

Задача 7

```
In [20]: l1=int(input())
c1=int(input())
l2=int(input())
c2=int(input())

if (l1+c1+l2+c2)%2==0:
    print('YES')
else:
    print('NO')
```

```
1
1
2
3
NO
```

Задача 8

```
In [22]: n=int(input())
m=int(input())
k=int(input())

if k%n==0 or k%m==0:
    print('YES')
else:
    print('NO')
```

```
2
10
7
NO
```

Задача 9

```
In [25]: n=int(input())
t='На лугу пасется'

if n>=11 and n<=14:
    print(t,n,'коров')
else:
    i=n%10
    if i==0 or (i>=5 and i<=9):
        print(t,n,'коров')
    if i==1:
        print(t,n,'корова')
    if i>=2 and i<=4:
        print(t,n,'коровы')
```

```
1
На лугу пасется 1 корова
```

Задача 10

```
In [26]: x=int(input())

if x>0:
    print('1')
elif x<0:
    print('-1')
else:
    print('0')
```

3
1

Задача 11

```
In [27]: 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
1
YES

Задача 12

```
In [30]: x1=int(input())
y1=int(input())
x2=int(input())
y2=int(input())

if y2<=y1 or (x1+y1)%2!=(x2+y2)%2:
    print('NO')
elif x1-(y2-y1)<=x2 and x1+(y2-y1)>=x2:
    print('YES')
else:
    print('NO')
```

2
2
1
1
NO

Задача 13

```
In [34]: a1=int(input())
a2=int(input())
a3=int(input())

if a1>=a2 and a1>=a3:
    maxa=a1
    oth1=a2
    oth2=a3
elif a2>=a1 and a2>=a3:
    maxa=a2
    oth1=a1
    oth2=a3
else:
    maxa=a3
    oth1=a1
    oth2=a2

if (maxa**2)==(oth1**2+oth2**2):
    print('rectangular')
elif maxa<oth1+oth2:
    print('obtuse')
else:
    print('impossible')
```

```
3
5
4
rectangular
```

Задача 14

```
In [37]: A=int(input())
B=int(input())
C=int(input())
if A%2==0 or B%2==0 or C%2==0:
    if A%2!=0 or B%2!=0 or C%2!=0:
        print('YES')
    else:
        print('NO')
else:
    print('NO')
```

```
7
7
7
NO
```

Задача 15

```
In [42]: a,b,c=int(input()),int(input()),int(input())
if a>=b and a>=c:
    if b>=c:
        (a,c)=(c,a)
    else:
        (a,c)=(c,a)
        (b,a)=(a,b)
elif b>=a and b>=c:
    if c>=a:
        (b,c)=(c,b)
    else:
        (b,c)=(c,b)
        (a,b)=(b,a)
elif b<=a:
    (a,b)=(b,a)
print(a,b,c)
```

```
3
2
1
1 2 3
```

Задача 16

```
In [43]: a,b,c=int(input()),int(input()),int(input())
count=0
if a==b==c:
    print('3')
elif a==b or b==c or a==c:
    print('2')
else:
    print('0')
```

```
1
2
3
0
```

Задача 17

```
In [46]: 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 (A<=D and C<=E) or (A<=E and C<=D):
    print('YES')
elif (C<=D and B<=E) or (C<=E and B<=D):
    print('YES')
else:
    print('NO')
```

```
2
2
2
1
1
NO
```

Задача 18

```
In [50]: A1,B1,C1,A2,B2,C2=int(input()),int(input()),int(input()),int(input()),int(inp
ut()),int(input())
if A1>=B1 and B1>=C1:
    S1=A1
    S2=B1
    S3=C1
elif A1>=B1 and C1>=A1:
    S1=C1
    S2=A1
    S3=B1
elif A1>=C1 and C1>=B1:
    S1=A1
    S2=C1
    S3=B1
elif B1>=A1 and B1>=C1:
    S1=B1
    S2=A1
    S3=C1
elif B1>=C1 and C1>A1:
    S1=B1
    S2=C1
    S3=A1
elif C1>A1 and B1>A1:
    S1=C1
    S2=B1
    S3=A1

if A2>=B2 and B2>=C2:
    W1=A2
    W2=B2
    W3=C2
elif A2>=B2 and C2>A2:
    W1=C2
    W2=A2
    W3=B2
elif A2>=C2 and C2>B2:
    W1=A2
    W2=C2
    W3=B2
elif B2>A2 and A2>=C2:
    W1=B2
    W2=A2
    W3=C2
elif B2>=C2 and C2>A2:
    W1=B2
    W2=C2
    W3=A2
elif C2>A2 and B2>A2:
    W1=C2
    W2=B2
    W3=A2

if S1==W1 and S2==W2 and S3==W3:
    print("Boxes are equal")
elif S1>=W1 and S2>=W2 and S3>=W3:
    print("The first box is larger than the second one")
elif W1>S1 and W2>S2 and W3>S3:
    print("The first box is smaller than the second one")
else:
    print("Boxes are incomparable")
```



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

Задача 19

```
In [57]: a,b,c=int(input()),int(input()),int(input())
d,e,f=int(input()),int(input()),int(input())
res=0
i=0
i=(a//d)*(b//e)*(c//f)
if i>res:
    res=i
i=(a//d)*(b//f)*(c//e)
if i>res:
    res=i
i=(a//e)*(b//d)*(c//f)
if i>res:
    res=i
i=(a//e)*(b//f)*(c//d)
if i>res:
    res=i
i=(a//f)*(b//d)*(c//e)
if i>res:
    res=i
i=(a//f)*(b//e)*(c//d)
if i>res:
    res=i
print(res)
```

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

Задача 20

```
In [66]: k=int(input())
if k%5==0 or k%3==0 or (k>7):
    print('YES')
else:
    print('NO')
```

```
3
YES
```

Задача 21

```
In [63]: 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/a==d/c:
    print('NO')
else:
    print(int(-b/a))
```

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

Задача 22

```
In [71]: 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
5
20
```

Задача 23

```
In [3]: l1,r1=int(input()),int(input())
l2,r2=int(input()),int(input())
l3,r3=int(input()),int(input())
if (l1 >= 0) and (l1 < r1) and (r1 <= 100) and \
    (l2 >= 0) and (l2 < r2) and (r2 <= 100) and \
    (l3 >= 0) and (l3 < r3) and (r3 <= 100):
    if ((l2 - r1) <= 1) and ((l3-r2) > 1) and (l1 < l2) and \
        (l2 < r3) and (l1 < r3):
        print('3')
    elif ((l2-r1) > 1) and ((l3-r2) > 1) and (l2-r1) <= (r3-l3):
        print('3')
    elif ((l2-r1) > 1) and ((l3-r2) <= 1):
        print('1')
    elif ((l2-r1) <= 1) and (((l3-r2) <= 1) or ((l3-r1) <= 1)):
        print('0')
    else:
        print('-1')
else:
    print('-1')
```

```
0
2
4
5
3
6
1
```

Задача 24

```
In [2]: l1,w1,h1=int(input()),int(input()),int(input())
l2,w2,h2=int(input()),int(input()),int(input())
lc,wc,hc=int(input()),int(input()),int(input())
i=1
lenght=l1
if l1<w1:
    l1=w1
    w1=lenght
lenght=l2
if l2<w2:
    l2=w2
    w2=lenght
lenght=lc
if lc<=wc:
    lc=wc
    wc=lenght
if l1<=lc and w1<=wc and l2<=lc and w2<=wc:
    if h1>hc or h2>hc:
        print("NO")
        i=0
    if i==1 and l1<=lc and w1<=wc:
        if i==1 and l2<=wc-w1 and w2<=lc:
            print("YES")
            i=0
        elif i==1 and w2<=wc-w1 and l2<=lc:
            print("YES")
            i=0
        elif i==1 and l2<=lc-l1 and w2<=wc:
            print("YES")
            i=0
        elif i==1 and w2<=lc-l1 and l2<=wc:
            print("YES")
            i=0
    if i==1 and w1<=lc and l1<=wc:
        if i==1 and l2<=wc-l1 and w2<=lc:
            print("YES")
            i=0
        elif i==1 and l2<=lc and w2<=wc-l1:
            print("YES")
            i=0
        elif i==1 and l2<=lc-w1 and w2<=wc:
            print("YES")
            i=0
        elif i==1 and w2<=lc-w1 and l2<=wc:
            print("YES")
            i=0
    if i==1 and h1+h2<=hc and l1<=lc and w1<=wc and l2<=lc and w2<=wc:
        print("YES")
        i=0
    elif i==1:
        print("NO")
else:
    print("NO")
```

2
2
3
3
3
3
3
5
3
YES

In []: