

Практическая работа 6

Задача 1

```
In [1]: n=int(input())
i=1
s=0
while i<=n:
    s=s+(1/i**2)
    i+=1
print(s)

3
1.3611111111111112
```

Задача 2

```
In [15]: X=str(input())
print('0.'+X.split('.')[1])

0.001
0.001
```

Задача 3

```
In [18]: X=str(input())
print(X.replace('.', ' '))

3.50
3 50
```

Задача 4

```
In [23]: N=str(input())
if int(N.split('.')[1])>=5:
    print(int(N.split('.')[0])+1)
else:
    print(int(N.split('.')[0]))

2.7
3
```

Задача 5

```
In [33]: P=int(input()) #проценты
X=int(input()) #рубли
Y=int(input()) #копейки
s1=X*100+Y
s2=s1*(P/100)+s1
print(int(s2//100), int(s2%100))
```

```
10
100
0
110 0
```

Задача 6

```
In [45]: P=int(input()) #проценты
X=int(input()) #рубли
Y=int(input()) #копейки
K=int(input()) #лет
kop=(X*100)+Y
for i in range(K):
    kop+=int(kop*P/100)
print(kop // 100, kop % 100)
```

```
1
1
0
1000
11881 92
```

Задача 7

```
In [15]: n=int(input())
x=float(input())
a1=float(input())
P=a1
for i in range (n):
    a2=float(input())
    P=P*x+a2
j=10
K=(int(P*j)%j)
while K!=0:
    j*=10
    K=(int(P*j)%10)
if j!=10:
    P=((P*(j/10))/1)/(j/10)
    print(P)
else:
    print(int(P))
```

```
5
7.1
1
2
3
4
5
6
24441.5
```

Задача 8

```
In [35]: x=int(input())
inp=''
summ=0
while x!=0:
    inp+=str(x)
    summ+=x
    x=int(input())
    if x!=0:
        inp+=','
inp=inp.split(',')
s=summ/len(inp)
u=int(len(inp))
for i in range(len(inp)):
    x+=((int(inp[i])-s)**2)
sigma=(x/(len(inp)-1))**.5
print(sigma)
```

```
1
1
1
1
1
1
1
1
1
1
1
0
0.0
```

Задача 9

```
In [43]: a=float(input())
b=float(input())
c=float(input())
D=b*b-4*a*c
if D>0:
    x1=(-b-D**.5)/(2*a)
    x2=(-b+D**.5)/(2*a)
    if x1==x1//1:
        x1=int(x1)
    if x2==x2//1:
        x2=int(x2)
    print(x1,x2)
elif D==0:
    x=-b/(2*a)
    if x==x//1:
        x=int(x)
    print(x)
else:
    print('')
```

```
4
0
-2
-0.7071067811865476 0.7071067811865476
```

Задача 10

```
In [ ]: a=float(input())
b=float(input())
c=float(input())
D=b*b-4*a*c
if a!=0:
    if D>0:
        x1=(-b-D**.5)/(2*a)
        x2=(-b+D**.5)/(2*a)
        if x1==x1//1:
            x1=int(x1)
        if x2==x2//1:
            x2=int(x2)
        print('2',x1,x2)
    elif D==0:
        x=-b/(2*a)
        if x==x//1:
            x=int(x)
        print('1',x)
    else:
        print('0')
else:
    print('3')
```

Задача 11

```
In [48]: a=float(input())
b=float(input())
c=float(input())
d=float(input())
e=float(input())
f=float(input())
y=(a*f-c*e)/(a*d-c*b)
x=(e-b*y)/a
if y==y//1:
    y=int(y)
if x==x//1:
    x=int(x)
print(x,y)
```

```
3
5
4
4
11
12
2 1
```

Задача 12

```
In [55]: a = float(input())
b = float(input())
c = float(input())
d = float(input())
e = float(input())
f = float(input())
if a==0 and b==0 and c==0 and d==0 and e==0 and f==0:
    print('5')
elif a*d==b*c and a*f==c*e:
    if b==0 and d==0:
        if a!=0 and c!=0:
            x=e/a
            if x==x//1:
                x=int(x)
            print('3',x)
        elif a==0:
            if e==0:
                x=f/c
                if x==x//1:
                    x=int(x)
                print('3',x)
            elif c==0:
                if f==0:
                    x=e/a
                    if x==x//1:
                        x=int(x)
                    print('3',x)
        elif a==0 and c==0:
            if b!=0:
                y=e/b
                if y==y//1:
                    y=int(y)
                print('4',y)
            elif d!=0:
                y=f/b
                if y==y//1:
                    y=int(y)
                print('4', y)
        elif b!=0:
            p=-a/b
            q=e/b
            if p==p//1:
                p=int(p)
            if q==q//1:
                q=int(q)
            print('1',p,q)
        elif d!=0:
            p=-c/d
            q=f/d
            if p==p//1:
                p=int(p)
            if q==q//1:
                q=int(q)
            print('1',p,q)
    elif a*d==b*c and a*f!=c*e:
        print('0')
    elif b==0 and d==0 and a*f!=c*e:
        print('0')
    elif a==0 and c==0 and b*f!=d*e:
        print('0')
    elif c==0 and d==0 and f!=0:
        print('0')
    elif a==0 and b==0 and e!=0:
```

```

        print('0')
    else:
        x=(e*d-b*f)/(a*d-b*c)
        y=(a*f-e*c)/(a*d-b*c)
        if y==y//1:
            y=int(y)
        if x==x//1:
            x=int(x)
        print('2', x, y)

```

```

1
1
2
2
1
2
1 -1 1

```

Задача 13

```

In [61]: s=str(input())
print(s[2])
print(s[-2])
print(s[0:5])
print(s[:-2])
print(s[::2])
print(s[1::2])
print(s[::-1])
print(s[-1::-2])
print(len(s))

```

```

Abrakadabra
r
r
Abrak
Abrakadab
Arkdba
baaar
arbadakarbA
abdkrA
11

```

Задача 14 ¶

```

In [63]: s=str(input())
count=len(s)-len(s.replace('f',''))
if count==0:
    pass
elif count==1:
    print(s.index('f'))
else:
    print(s.index('f'), s.rindex('f'))

```

```

office
1 2

```

Задача 15

```
In [67]: s=str(input())
s=s[:s.find('h')]+s[s.rfind('h')+1:]
print(s)
```

```
In the hole in the ground there lived a hobbit
In tobbit
```

Задача 16

```
In [69]: s=str(input())
s=s[:s.rfind('h')]+s[s.find('h')+1:s.rfind('h')]+s[s.rfind('h'):]
print(s)
```

```
In the hole in the ground there lived a hobbit
In the hole in the ground there lived a e hole in the ground there lived a hob
bit
```

Задача 17

```
In [72]: s=input()
count=0
for i in range(len(s)):
    if s[i]=='f':
        count+=1
        if count==2:
            print(i)

if count==1:
    print('-1')
elif 'f' not in s:
    print('-2')
```

```
qwerty
-2
```

Задача 18

```
In [77]: s=input()
st=s.split(' ')
s=st[1]+' '+st[0]
print(s)
```

```
Q WERTYUIOP
WERTYUIOP Q
```

Задача 19

```
In [79]: s=input()
st=s.split(' ')
print(len(st))
```

```
q w e
3
```

Задача 20

```
In [3]: s=input()
s=s.replace('1','one')
print(s)

1+1=2
one+one=2
```

Задача 21

```
In [7]: s=input()
s=s.replace('@','')
print(s)

Bilbo.Bagginsbagend.hobbiton.shire.me
Bilbo.Bagginsbagend.hobbiton.shire.me
```

Задача 22

```
In [12]: s=input()
st=s[s.find('h')+1:s.rfind('h'):]
print(st)
st=st.replace('h','H')
s=s[:s.find('h')+1:]+st+s[s.rfind('h')::]
print(s)

asdfghhzcxb
asdfghhzcxb
```

Задача 23

```
In [16]: s=input()
i='*'
print(i.join(list(s)))

Hello
H*e*l*l*o
```

Задача 24

```
In [19]: s=input()
st=''
for i in range(len(s)):
    if i%3!=0:
        st=st+s[i]
print(st)

qwer
we
```

In []: