

Практическая работа 6

Задача 1

```
In [22]: n=int(input())
i = 2
s=1
while i != n + 1:
    s += 1/(i**2)
    i += 1
print(s)

6
1.4913888888888889
```

Задача 2

```
In [38]: n=float(input())
if n>0:
    n=n-n//1
else:
    print(n)

print(n)

0.0001
0.0001
```

Задача 3

```
In [43]: import math
x = float(input())
b = x * 100
a = math.floor(b // 100)
m = math.floor(b % 100)
print(a, m)

12.43
12 43
```

Задача 4

```
In [55]: n=float(input())
n=n*10
a=n//10
if n%10>=5:
    a=a+1
    print(int(a))
else:
    print(int(a))

5.7
6
```

Задача 5

```
In [56]: p,x,y = int(input()),int(input()),int(input())
N = 100 * x + y
S = int(N * (100 + p) / 100)
print(S // 100, S % 100)
```

```
12
145
0
162 40
```

Задача 6

```
In [57]: p,x,y,k=int(input()),int(input()),int(input()),int(input())
sum = 100 * x + y
for i in range(k):
    sum += int(sum * p / 100)

print(sum // 100, sum % 100)
```

```
12
179
0
5
315 43
```

Задача 7

```
In [86]: n,x,a = int(input()),float(input()),float(input())
p=a
for i in range (n):
    t=float(input())
    p=p*x+t
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
7.100
1.000
2.000
3.000
4.000
5.000
6.000
24441.5
```

Задача 8

```
In [59]: from math import sqrt
sum = 0
p = 0
x = int(input())
n = 0
while x != 0:
    n += 1
    sum += x
    p += x ** 2
    x = int(input())
print(sqrt((p - sum ** 2 / n) / (n - 1)))

1
7
9
0
4.163331998932266
```

Задача 9

```
In [78]: import math
a,b,c= float(input()),float(input()),float(input())
D=b**2-4*a*c

if D==0:
    x=(-b+sqrt(D))/2*a
    print(x)

elif D<0:
    print(' ')

else:
    x1=(-b+sqrt(D))/2*a
    x2=(-b-sqrt(D))/2*a
    if x1>x2:
        x1,x2 = x2,x1
        print(x2,x1)
    else:
        print(x1,x2)

1
2
1
-1.0
```

Задача 10

```
In [79]: import math
a,b,c= float(input()),float(input()),float(input())
D=b**2-4*a*c

if D==0:
    x=(-b+sqrt(D))/2*a
    print(1, x)

elif D<0:
    print(0)

elif D>0:
    x1=(-b+sqrt(D))/2*a
    x2=(-b-sqrt(D))/2*a
    if x1>x2:
        x1,x2 = x2,x1
        print(2,x1,x2)
    else:
        print(2,x1,x2)
else:
    print(3)
```

```
1
-7.5
3
2 0.4239663260874824 7.076033673912518
```

Задача 11

```
In [80]: a,b,c,d,e,f = float(input()),float(input()),float(input()),float(input()),flo
at(input()),float(input())
if b != 0:
    y = (c * e - a * f) / (b * c - a * d)
    if c != 0:
        x = (f - d * y) / c
        print(x, y)
else:
    if a != 0:
        x = (f * b - d * e) / (b * c - d * a)
        if d != 0:
            y = (f - c * x) / d
            print(x, y)
```

```
1
2
3
4
-1
-1
1.0 -1.0
```

Задача 12

```

In [82]: a,b,c,d,e,f = float(input()),float(input()),float(input()),float(input()),float(input()),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:
    print(0)
elif a == 0 and b == 0 and e != 0:
    print(0)
elif c == 0 and d == 0 and f != 0:
    print(0)
elif a == 0 and c == 0 and b * f != d * e:
    print(0)
elif b == 0 and d == 0 and a * f != c * e:
    print(0)
elif a * d == b * c and a * f == c * e:
    if b == 0 and d == 0:
        if a != 0 and c != 0:
            print(3, e / a)
        elif a == 0:
            if e == 0:
                print(3, f / c)
        elif c == 0:
            if f == 0:
                print(3, e / a)
    elif a == 0 and c == 0:
        if b != 0:
            print(4, e / b)
        elif d != 0:
            print(4, f / d)
    elif b != 0:
        print(1, -a / b, e / b)
    elif d != 0:
        print(1, -c / d, f / d)
else:
    x = (e * d - b * f) / (a * d - b * c)
    y = (a * f - e * c) / (a * d - b * c)
    print(2, x, y)

```

```

0
2
0
4
1
2
4 0.5

```

Задача 13

```
In [106]: Str=input()
print(Str[2])#1 Третий символ
print(Str[-2])#2 Предпоследний
print(Str[0:5])#3 Первые пять
print(Str[0:-2])#4 Вся строка, кроме последних двух
print(Str[:2])#5 Символы с четными индексами
print(Str[1::2])#6 Символы с нечетными индексами
print(Str[::-1])#7 В обратном порядке
print(Str[::-2])#8 Все символы строки через один в обратном порядке
print(len(Str))#9 Подсчет символов
```

```
grqqeqrhheqth
q
t
grqqe
grqqeqrhheq
gqerhqh
rqqhet
htqehhrqeqqrg
hqhreqg
13
```

Задача 14

```
In [111]: s = input()
a = s.find('f')
b = s.rfind('f')
if a == -1:
    print()
elif a == b:
    print(a)
else:
    print(a, b)
```

```
office
1 2
```

Задача 15

```
In [113]: s = input()
s = s[:s.find('h')] + s[s.rfind('h') + 1:]
print(s)
```

```
ashfewfwfhcehr
asr
```

Задача 16

```
In [115]: s = input()
s=s[:s.find('h')+1] + s[s.find('h')+1:s.rfind('h')]*2 + s[s.rfind('h'):]
print(s)
```

```
qwertyhasdfghzxcvb
qwertyhasdfgasdfghzxcvb
```

Задача 17

```
In [120]: s=input()
q=0
for i in range(len(s)):
    if s[i]=="f":
        q+=1
        if q==2:
            print(i)

if q==1:
    print('-1')
else:
    print('-2')
```

```
qwerty
-2
```

Задача 18

```
In [130]: s = input()
a = s[0:s.find(' ')]
b = s[s.find(' ')+1:]
print(b,a)
```

```
Hello, world!
world! Hello,
```

Задача 19

```
In [137]: s = input()
kol=s.count(' ')+1
print(kol)
```

```
asd wfwg fwe
3
```

Задача 20

```
In [146]: s=input()
print(s.replace('1', 'one'))
```

```
1+1=11
one+one=oneone
```

Задача 21

```
In [149]: print(input().replace('@',''))
```

```
1@2@3@4@
1234
```

Задача 22

```
In [154]: s = input()
s=s[:s.find('h')+1]+s.replace('h', 'H')+s[-1:s.rfind('h')+1]

print(s)
```

```
hhhhhh
hHHHHHHh
```

Задача 23

```
In [163]: print("".join(input()))
```

```
asdf
a*s*d*f
```

Задача 24

```
In [166]: s = input()
t = ''
for i in range(len(s)):
    if i % 3 != 0:
        t = t + s[i]
print(t)
```

```
python
yton
```