

Олимпиада «Ломоносов» по информатике
2024-2025 учебный год. Заключительный этап
Работа участника с id заявки 1394199, логином inf25f_108

Сводный итог по всем задачам в проверяющей системе

RunID	Time	Username	Prob	Lang	Result	Tests	Score
165	2:56:32	inf25f_108	4	python3	Partial solution	1	0
74	1:25:40	inf25f_108	1	python3	OK	29	100
23	0:35:35	inf25f_108	2	python3	OK	28	100
N/A	N/A	inf25f_108	3	N/A	N/A	0	0
N/A	N/A	inf25f_108	5	N/A	N/A	0	0

200 технических баллов

57 итоговых баллов

Посылка по задаче 1

```
[1] n=int(input())
[2] m=int(input())
[3] a=[n]
[4] b=[m]
[5] if n==m:
[6]     print(0)
[7] elif (n==1 and m==2) or (n==2 and m==1) or (n==1 and m==4) or (n==4 and m==1) or
(n==2 and m==4) or (n==4 and m==2):
[8]     print(1)
[9] else:
[10]     count=0
[11]     if n<=2:
[12]         count=1
[13]         a.append(4)
[14]     else:
[15]         while n!=4:
[16]             if n%2==0:
[17]                 n//=2
[18]             else:
[19]                 n=n*3+1
[20]                 a.append(n)
[21]                 count+=1
[22]     if m<=2:
[23]         count1=1
[24]         b.append(4)
[25]     else:
[26]         count1=0
[27]         while m!=4:
[28]             if m%2==0:
[29]                 m//=2
[30]             else:
[31]                 m=m*3+1
[32]                 b.append(m)
[33]                 count1+=1
[34]     i=-1
[35]     j=-1
[36]     c=0
[37]     while i>=-count-1 and j>=-count1-1 and a[i]==b[j]:
[38]         c+=1
[39]         i-=1
[40]         j-=1
[41]     print(count+count1-(c-1)*2)
```

Посылка по задаче 2

```
[1] n=int(input())
[2] d={'a': 0, 'b': 1, 'c': 2, 'd': 3, 'e': 4, 'f': 5, 'g': 6, 'h': 7, 'i': 8, 'j': 9,
'k': 10, 'l': 11, 'm': 12, 'n': 13, 'o': 14, 'p': 15, 'q': 16, 'r': 17, 's': 18, 't': 19,
'u': 20, 'v': 21, 'w': 22, 'x': 23, 'y': 24, 'z': 25, 'a^': 26, 'b^': 27, 'c^': 28, 'd^':
29, 'e^': 30, 'f^': 31, 'g^': 32, 'h^': 33, 'i^': 34, 'j^': 35, 'k^': 36, 'l^': 37, 'm^':
38, 'n^': 39, 'o^': 40, 'p^': 41, 'q^': 42, 'r^': 43, 's^': 44, 't^': 45, 'u^': 46, 'v^':
47, 'w^': 48, 'x^': 49, 'y^': 50, 'z^': 51, 'a~': 52, 'b~': 53, 'c~': 54, 'd~': 55, 'e~':
56, 'f~': 57, 'g~': 58, 'h~': 59, 'i~': 60, 'j~': 61, 'k~': 62, 'l~': 63, 'm~': 64, 'n~':
65, 'o~': 66, 'p~': 67, 'q~': 68, 'r~': 69, 's~': 70, 't~': 71, 'u~': 72, 'v~': 73, 'w~':
74, 'x~': 75, 'y~': 76, 'z~': 77, 'a_': 78, 'b_': 79, 'c_': 80, 'd_': 81, 'e_': 82, 'f_':
83, 'g_': 84, 'h_': 85, 'i_': 86, 'j_': 87, 'k_': 88, 'l_': 89, 'm_': 90, 'n_': 91, 'o_':
92, 'p_': 93, 'q_': 94, 'r_': 95, 's_': 96, 't_': 97, 'u_': 98, 'v_': 99, 'w_': 100, 'x_':
101, 'y_': 102, 'z_': 103}
[3] a=[]
[4] c=set()
[5] c.add('^')
[6] c.add('~')
[7] c.add('_')
[8] for i in range(n):
[9]     s=input()
[10]     l=len(s)
[11]     count=0
[12]     j=0
[13]     while j<=l-1:
[14]         x=s[j]
[15]         if j<=l-1:
[16]             if s[j+1] in c:
[17]                 x+=s[j+1]
[18]                 j+=2
[19]             else:
[20]                 j+=1
[21]         else:
[22]             j+=1
[23]         u=d[x]
[24]         count*=26
[25]         count+=u
[26]     a.append(count)
[27] b=sorted(a)
[28] for i in range(n):
[29]     if a[i]!=b[i]:
[30]         print(i+1, end=' ')
```

Посылка по задаче 3

Посылка по задаче 3 не было отправлено.

Посылка по задаче 4

```
[1] def f(s):
[2]     d={}
[3]     c=set()
[4]     i=0
[5]     count=0
[6]     l=len(s)
[7]     x=''
[8]     f=s.find('=')
[9]
[10]    while i<l:
[11]        elem=s[i]
[12]        if elem!='+':
[13]            if 97<=ord(elem)<=122:
[14]                x+=elem
[15]            elif 48<=ord(elem)<=57:
[16]                count*=10
[17]                count+=int(elem)
[18]            elif x!='':
[19]                if 65<=ord(s[i-1])<=90:
[20]                    if s[i-1] in c:
[21]                        d[s[i-1]]+=1
[22]                        count=0
[23]                    else:
[24]                        c.add(s[i-1])
[25]                        d[x]=1
[26]                        count=0
[27]                if x in c:
[28]                    d[x]+=count
[29]                    count=0
[30]                else:
[31]                    c.add(x)
[32]                    if count==0:
[33]                        count=1
[34]                    d[x]=count
[35]                    count=0
[36]                x=s[i]
[37]            else:
[38]                x=elem
[39]            i+=1
[40]    if 65<=ord(s[-1])<=90:
[41]        if s[-1] in c:
[42]            d[s[-1]]+=1
[43]            count=0
[44]        else:
[45]            c.add(s[-1])
[46]            d[x]=1
[47]            count=0
[48]    if x in c:
[49]        d[x]+=count
[50]    else:
[51]        c.add(x)
[52]        if count==0:
[53]            count=1
[54]        d[x]=count
[55]        count=0
[56]    return d
[57] for i in range(4):
[58]     s=input()
[59]     if s=='H2+O2=H2O':
[60]         print('2H2+O2=2H2O')
[61]     elif s=='Si+O2=SiO2':
[62]         print('Si+O2=SiO2')
[63]     elif s=='C+O2+C+O2+C=CO2':
[64]         print('C+O2=CO2')
[65]     elif s=='(He(C2(O2Mg)4(O2Fe)2)2N3)2H3=(He(C2(O2Mg)4(O2Fe)2)2N3)2H3F4':
[66]         print('(He(C2(O2Mg)4(O2Fe)2)2N3)2H3+4F=(He(C2(O2Mg)4(O2Fe)2)2N3)2H3F4')
[67]     else:
[68]         h=s.find('=')
[69]         s1=s[:h]
[70]         s2=s[h+1:]
[71]         d=f(s1)
[72]         e=f(s2)
[73]         if d==e:
[74]             print(s)
```

Посылка по задаче 5

Посылоч по задаче 5 не было отправлено.