#include <cstdio>

#include <algorithm>

using namespace std;

#define P 1993

#define MAXN 1000000

int s[MAXN+10];

char s\_ch[MAXN+10];

struct official

{

int num, d;

} d[MAXN+10];

bool operator < (official a, official b)

{

return a.d < b.d || a.d == b.d && a.num < b.num;

}

int main()

{

int n, p, q, l, i;

n = l = 0;

do

{

if (getchar() == '(')

{

s[l] = n;

s\_ch[l++] = '(';

d[n].d = 1;

d[n++].num = 3;

}

else

{

p = s[--l];

d[p].num += P;

if (l)

{

q = s[l-1];

d[q].num \*= d[p].num;

if (d[q].d < d[p].d+1)

d[q].d = d[p].d+1;

}

}

}

while (l);

sort(d, d+n);

for (p = i = 1; i < n; i++)

if (d[i].d == d[i-1].d)

p += (d[i].num != d[i-1].num);

else

{

printf("%d\n", p);

p = 1;

}

printf("%d\n", p);

return 0;

}