import java.util.Scanner;

class Counter{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

String s=sc.next();

char c;

int count1=0,count2=0;

for(int i=0;i<s.length();i++)

{

c=s.charAt(i);

if(c=='\*')

count1++;

if(c=='#')

count2++;

}

if(count1==count2)

System.out.println("0");

else if(count1>count2)

System.out.println("positive integer ");

else

System.out.println("negative integer ");

}

}