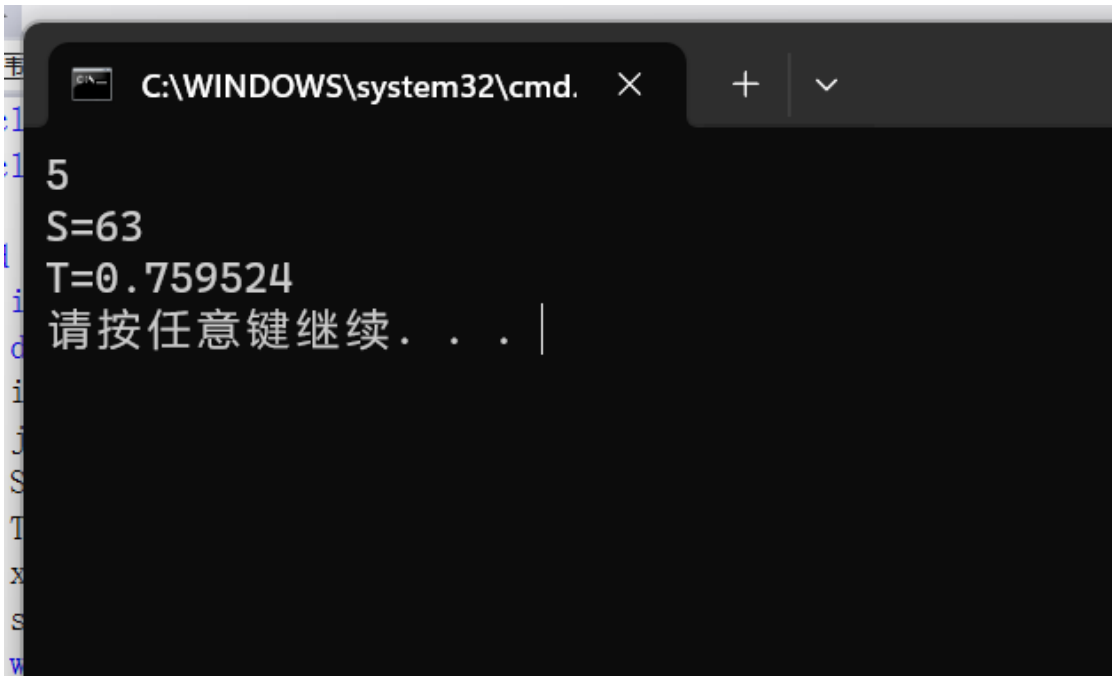
练习 6

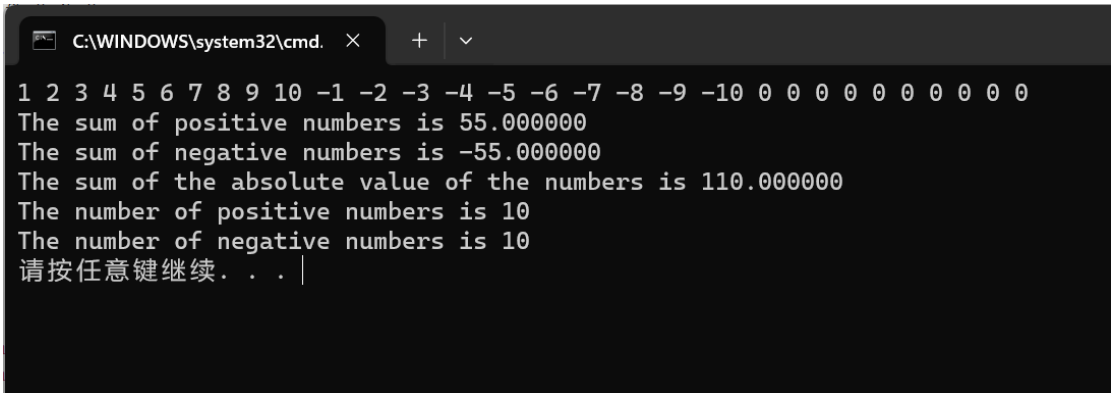
2.

```
#include<stdio.h>
#include<math.h>

void main(){
    int N,S,K,x,i,j;
    double T;
    i=0;
    j=1;
    S=0;
    T=0;
    x=1;
    scanf("%d",&N);
    while(i<=N){
        S+=pow(2,i);
        i++;
    }
    K=sqrt(S);
    while(j<=K){
        T+=x*(1.0)/j;
        x=-x;
        j++;
    }
    printf("S=%d\n",S);
    printf("T=%f\n",T);
}
```



7.

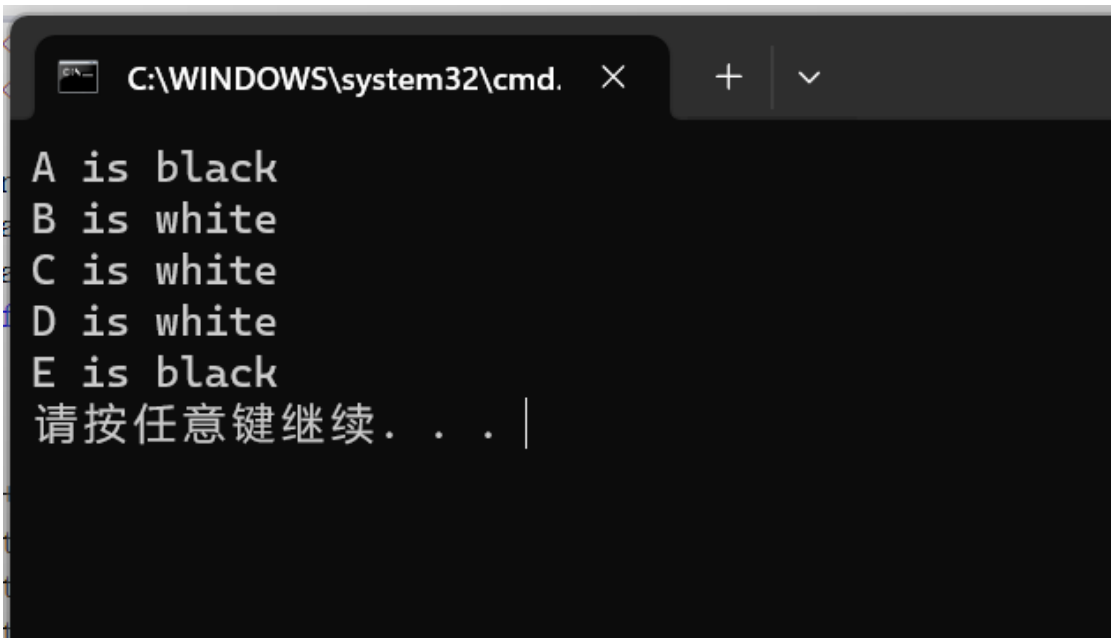
```
#include<stdio.h>
#include<math.h>

void main(){
	double x,zh,fh,jh;
	int zg,fg,i;
	i=1;
	zg=0;fg=0;zh=0;fh=0;jh=0;
	while(i<31){
		scanf("%lf",&x);
		jh+=fabs(x);
		if(x>0){
			zh+=x;
			zg++;}
		if(x<0){
			fh+=x;
			fg++;
		}
		i++;
	}
	printf("The sum of positive numbers is %f\n",zh);
	printf("The sum of negative numbers is %f\n",fh);
	printf("The sum of the absolute value of the numbers is %f\n",jh);
	printf("The number of positive numbers is %d\n",zg);
	printf("The number of negative numbers is %d\n",fg);
}
```



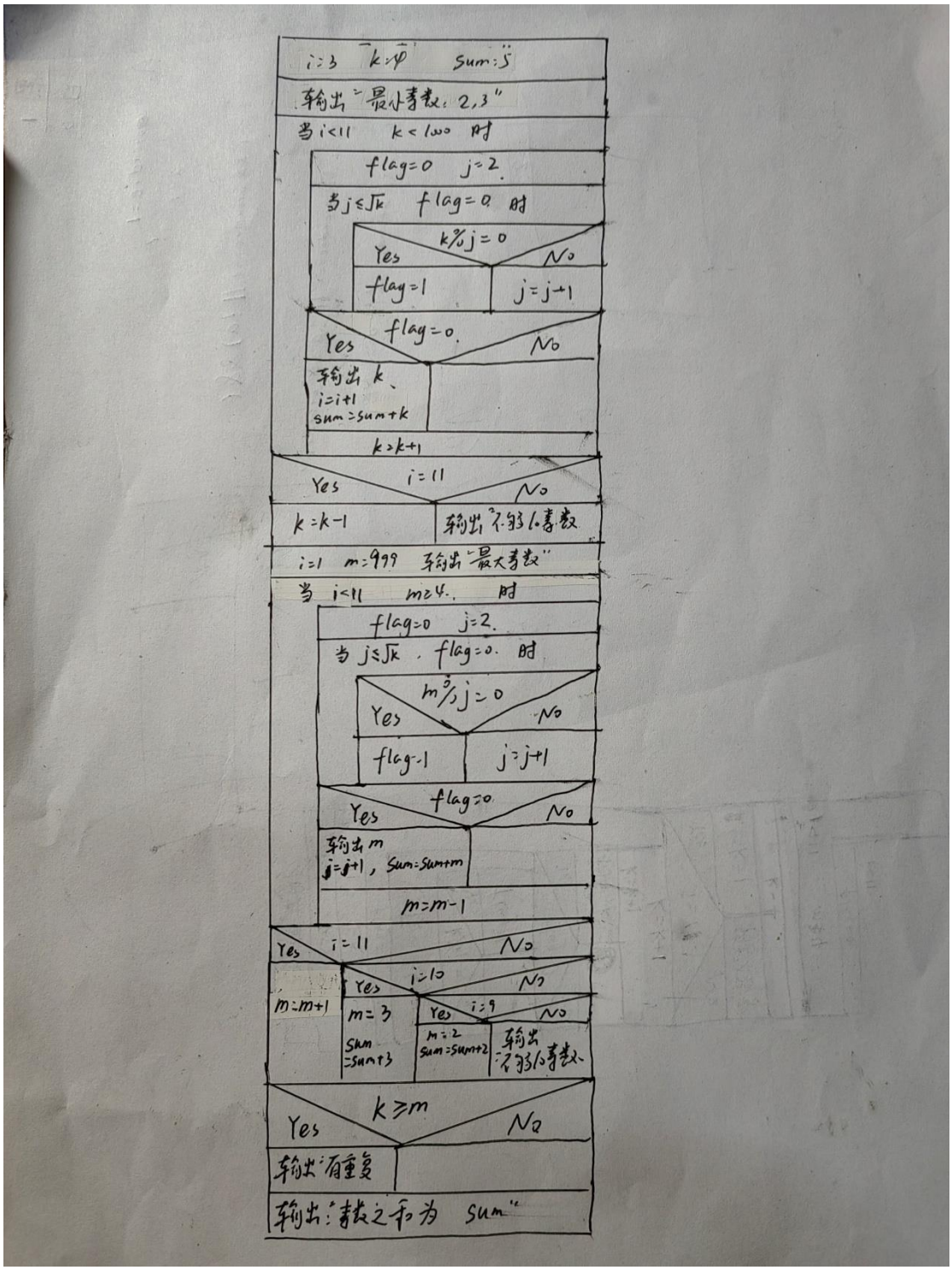
9.

```
#include<stdio.h>
#include<math.h>

void main(){
	int a,b,c,d,e;
	for(a=0;a<2;a++){
```

```
        for(b=0;b<2;b++){
            for(c=0;c<2;c++){
                for(d=0;d<2;d++){
                    for(e=0;e<2;e++){
if((a&&b+c+d+e==1||!a&&b+c+d+e!=1)&&(b&&a&&c&&d&&e||!b&&a+c+d+e!=4)&&(c&&a+b+d+e==3||!c&&a+b+d+e!=3)&&(d&&!a&&!b&&!c&&!e||!d&&a+b+c+e!=0)){
    printf("A is %s\n",a?"black":"white");
    printf("B is %s\n",b?"black":"white");
    printf("C is %s\n",c?"black":"white");
    printf("D is %s\n",d?"black":"white");
    printf("E is %s\n",e?"black":"white");
}
                    }
                }
            }
        }
    }

}
```

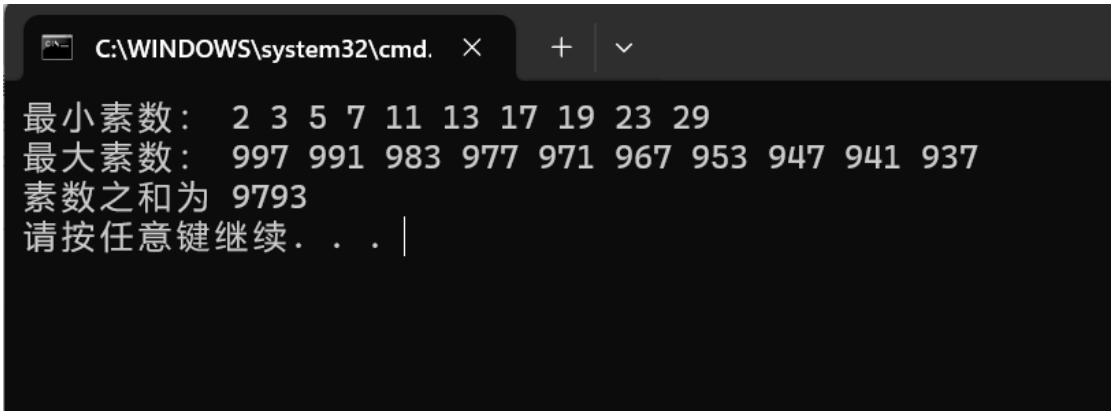


10.




```c
#include<stdio.h>
#include<math.h>

void main(){
    int i,k,sum,flag,m,j;
```

```
        i=3;k=4;sum=5;
        printf("最小素数：  2 3"); //2，3单独考虑，因为2，3开根号小于2
        while(i<11&&k<1000){
            flag=0;j=2;
            while(j<=sqrt(k)&&flag==0){
                if(k%j==0) flag=1;
                else j=j+1;
            }
            if(!flag){
                printf(" %d",k);
                i++;
                sum+=k;
            }
            k++;
        }
        if(i==11) k--;
        else printf("不够10个最小素数"); //不够10个素数时i取不到11
        i=1;m=999;
        printf("\n最大素数：");
         while(i<11&&m>=4){
            flag=0;j=2;
            while(j<=sqrt(m)&&flag==0){
                if(m%j==0) flag=1;
                else j=j+1;
            }
            if(!flag){
                printf(" %d",m);
                i++;
                sum+=m;
            }
            m--;
        }
         if(i=11) m=m+1;
         else if(i=10) { m=3;sum+=3;}  //i=10时4以上9个素数，则最后一个为3
         else if(i=9) {m=2;sum+=5;}   //i=9时4以上8个素数，最后两个为3，2
         else printf("不够10最大素数");
         if(k>=m) printf("最大10个素数与最小10个间有重复");
         printf("\n素数之和为 %d\n",sum);     //k为最小素数组中最大值，m为最大素数组中最小
值

}
```


C:\WINDOWS\system32\cmd.
最小素数： 2 3 5 7 11 13 17 19 23 29
最大素数： 997 991 983 977 971 967 953 947 941 937
素数之和为 9793
请按任意键继续. . .