绘制金字塔

统计用户输入

#include<stdio.h>

int main()

{

char a;

int i=0,c=0,b=0;

printf("Please input a string end by #:\n");

while((a=getchar())!='#')

{

if(a=='\n')

i++;

else if(a==' ')

c++;

else

b++;

}

printf("space: %d,newline: %d,others: %d\n",c,i,b);

return 0;

}

计算梯形面积

#include<stdio.h>

int main()

{

int n,i = 1;

double a,b,h,sum = 0;

printf("Enter n,a,b:");

scanf("%d,%lf,%lf",&n,&a,&b);

h = (b-a) / n;

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

{

sum = h\*(a+i\*h)\*(a+i\*h)+h\*2\*(a+i\*h)+h+sum;

}

sum = sum + h\*(a\*a+2\*a+1+b\*b+2\*b+1) / 2.0;

printf("Sum=%lf\n",sum);

return 0;

}

住房贷款月还款

#include<stdio.h>

int main()

{

int a,m,y;

double b,x;

printf("请输入贷款本金:loan\n");

printf("请输入月利率:rate\n");

scanf("%d%lf",&a,&b);

printf("还款年限\t月还款额\n");

for(y=5;y<=30;y++)

{

m = y\*12;

x = a\*b\*pow(1+b,m) / (pow(1+b,m) - 1);

printf("%d\t\t%.0f\n",y,x);

}

return 0;

}

牛顿迭代法

#include<stdio.h>

int main()

{

int i;

float a,x,y;

printf("Input a=? ");

scanf("%f",&a);

x = a;

for(i=1;i<=20;i++)

{

y = x;

x = (x + a / x) / 2.0;

if(fabs(x-y)<0.00001)

{

printf("\na=%.6f,x=%.6f,i=%d",a,x,i);

break;

}

}

if(i>20)

printf("\na=%.6f,x=%.6f,i=%d",a,x,i);

return 0;

}

打印对称图形

#include<stdio.h>

int main()

{

int n,i,j,k;

printf("Enter n(1-9):\n");

scanf("%d",&n);

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

{

for(j=1;j<i;j++)

{

printf(" ");

}

for(k=1;k<=2\*n+1-2\*i;k++)

{

printf("%d",n-i+1);

}

printf("\n");

}

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

{

for(j=1;j<=n-1-i;j++)

{

printf(" ");

}

for(k=1;k<=2\*i+1;k++)

{

printf("%d",i+1);

}

printf("\n");

}

return 0;

}

判断整型数据有几位

#include <stdio.h>

#include <math.h>

**int** main()

{

**int** a, b, digit, pos, i, j, k;

**int** d0=0, d1=0, d2=0, d3=0, d4=0, d5=0, d6=0, d7=0, d8=0, d9=0;

**int** counter = 1;

**printf**("Please enter the number:\n");

**scanf**("%d", &a);

b = a / 10;//1

**while** (b != 0) //1

{

counter++;//1

b = b / 10;//1

}

**printf**("%d: %d bits\n", a, counter);

pos = counter;

**for** (i=1; i<=counter; i++) //1

{

pos--;//1

k = 1;

**for** (j=1; j<=pos; j++)//1

{

k = k \* 10;//1

}

digit = **fabs**(a / k); //1

**switch** (digit) //1

{

**case** 0://1

d0++;//1

**break**;//1

**case** 1:

d1++;

**break**;

**case** 2:

d2++;

**break**;

**case** 3:

d3++;

**break**;

**case** 4:

d4++;

**break**;

**case** 5:

d5++;

**break**;

**case** 6:

d6++;

**break**;

**case** 7:

d7++;

**break**;

**case** 8:

d8++;

**break**;

**case** 9:

d9++;

**break**;

**default**:

**printf**("error\n");

}

a = **fabs**(a) - digit \* k; //1

}

**if** (d0 != 0) **printf**("0: %d\n", d0);//1

**if** (d1 != 0) **printf**("1: %d\n", d1);

**if** (d2 != 0) **printf**("2: %d\n", d2);

**if** (d3 != 0) **printf**("3: %d\n", d3);

**if** (d4 != 0) **printf**("4: %d\n", d4);

**if** (d5 != 0) **printf**("5: %d\n", d5);

**if** (d6 != 0) **printf**("6: %d\n", d6);

**if** (d7 != 0) **printf**("7: %d\n", d7);

**if** (d8 != 0) **printf**("8: %d\n", d8);

**if** (d9 != 0) **printf**("9: %d\n", d9);

**return** 0;

}

合法c语言标识符

#include <stdio.h>  
int main()  
{              
    char c;  
    int first = 1, flag1 = 0, flag2 = 1, n = 0;  
    while ((c = getchar()) != &apos;\n&apos;)  
    {              
        n++;  
        if (first == 1)  
        {              
            if ((c >= &apos;a&apos; && c <= &apos;z&apos;) || (c >= &apos;A&apos; && c <= &apos;Z&apos;) || (c == &apos;\_&apos;))  
                flag1 = 1;  
            first = 0;  
        }  
        else if (!((c >= &apos;a&apos; && c <= &apos;z&apos;) || (c >= &apos;A&apos; && c <= &apos;Z&apos;) || (c >= &apos;0&apos; && c <= &apos;9&apos;) || (c == &apos;\_&apos;)))  
            flag2 = 0;  
    }  
    if (flag1 == 1 && flag2 == 1 && n <= 31)  
        printf("is\n");  
    else  
        printf("is not\n");  
    return 0;  
}

 打印出以下图案：

\*

\* \* \*

\* \* \* \* \*

\* \* \* \* \* \* \*

\* \* \* \* \*

\* \* \*

\*

注意：中间一行前面没有多余的空格，除了最后一行每行的末尾在\*后和换行之前都有一个空格，最后一行在\*后没有空格直接输出换行

打印一个恶心的菱形

#include<stdio.h>

#include<stdlib.h>

int main()

{

int i, j, k;

//前四行

for (i = 0; i <= 3; i++)

{

for (j = 0; j <= 8 - 3\*i; j++)

{

printf(" ");

}

for (k = 0; k <= 2 \* i; k++)

{

if(k == 2\*i)

printf("\*");

else

printf("\* ");

}

printf("\n");

}

//后三行

for (i = 0; i <= 3; i++)

{

for (j = 0; j <= 3\*i+2; j++)

{

printf(" ");

}

for (k = 0; k <= 4 - 2 \* i; k++)

{

if(k == 4 - 2\*i)

printf("\*");

else

printf("\* ");

}

printf("\n");

}

system("pause");

return 0;

}

牛顿迭代法求根

#include<stdio.h>

#include<math.h>

int main()

{

double solut(double,double,double,double );//函数原型声明

double a,b,c,d;

printf("\n输入方程的系数a、b、c、d：\n");

scanf("%lf%lf%lf%lf",&a,&b,&c,&d);

printf("\n方程是：%5.2fx^3+%5.2fx^2+%5.2fx+%5.2f=0",a,b,c,d);

printf("\nX=%10.7f\n",solut(a,b,c,d));

return 0;

}

double solut(double a,double b,double c,double d)

{

double x=1,x0;

do

{

x0=x;

x=x0-(((a\*x+b)\*x+c)\*x+d)/((3\*a\*x+2\*b)\*x+c);

}

while(fabs(x-x0)>=1e-5);//为点xn+1与xn之间的距离，当两点的距离无限接近于0时，就时我们所要求的根x\*。如果取x\*这个点为例，我们发现方程在该点的切线与x轴的交点为x\*，此时x与x0之间的距离为零。

return x;

}

正弦值sin

#include<stdio.h>

#include<math.h>

double fact(int n)

{

if(n==0)

return 1;

return fact(n-1)\*n;

}

int main()

{

double x,eps,a,sum = 0;

int sign = 1,n;

printf("Enter x & eps:");

scanf("%lf%lf",&x,&eps);

for(n=1;1.0 / a >= eps;n++)

{

a = fact(2\*n-1) / pow(x,2\*n-1);

sum = sum + 1.0 / a\*sign;

sign = -sign;

}

printf("sin(%f)=%f\n",x,sum);

printf("%d,sin(%f)=%f\n",n-1,x,sum);

return 0;

}

1e-5正弦值sin

#include <stdio.h>

#include <math.h>

main()

{

**int** n = 1, count = 1;

**double** x;

**double** sum, term;

**printf**("Input x:");

**scanf**("%lf", &x);

sum = x;

term = x;

**do**

{

term = -term \* x \* x / ((n + 1) \* (n + 2 ));

sum = sum + term;

n = n + 2;

count++;

}

**while** (**fabs**(term) >= 1e-5);

**printf**("sin(x) = %lf, count = %d\n", sum, count);

}

计算本金和复利之和

#include<stdio.h>

#include<math.h>

int main()

{

int rate,year,i,j;

float sum;

printf("Enter interest rate:");

scanf("%d",&rate);

printf("Enter number of year:");

scanf("%d",&year);

printf("\nyears");

for(j=1;j<=5;j++)

{

printf("%6d%%",rate);

rate++;

}

rate = rate - 5;

for(i=1;i<=year;i++)

{

printf("\n%3d ",i);

for(j=1;j<=5;j++)

{

sum = 100 \* pow(1 + rate\*0.01,i);

rate++;

printf("%7.2f",sum);

}

rate = rate -5;

}

return 0;

}

孪生素数

#include<stdio.h>

int main()

{

long int c, d;

int j,k,a = 0,i;

printf("please input c,d(c>2):\n");

scanf("%ld,%ld",&c,&d);

for(i = c; i <= d - 2; i++)

{

for(j = 2; j <=sqrt(i); j++)

{

if(i%j == 0)break;

}

for(k = 2; k <=sqrt(i); k++)

{

if((i + 2)%k == 0)break;

}

if(j >sqrt(i) && k >sqrt(i + 2))

{

printf("(%ld,%ld)\n",i,i+2);

a++;

}

}

printf("total=%d\n",a);

return 0;

}

勾股数

#include<stdio.h>

#include<math.h>

int main()

{

int x,y,z,i = 0,j,k,m;

printf("请输入上限值m:");

printf("m以内的勾股数组有:\n");

scanf("%d",&m);

for(x = 1; x <= m; x++)

{

for(y = x; y <= m; y++)

{

for(z = y; z <= m; z++)

{

if(fabs(x\*x + y\*y - z\*z) <= 1e-5)

{

printf("(%d %d %d)\t",x,y,z);

i++;

if(i%3 == 0)

{

printf("\n");

}

}

}

}

}

printf("\n共%d组勾股数.",i);

}

求数组中最大值，最小值，

求最大数和最小数的最大公约数

#include<stdio.h>

int main()

{

int a[10];

int i,j,max,min;

printf("Input 10 numbers:\n");

for(i=0;i<10;i++)

{

scanf("%d",&a[i]);

}

max=min=a[0];

for(i=1;i<10;i++)

{

if(max<a[i])

max=a[i];

else if(min>a[i])

min=a[i];

}

printf("maxNum=%d\n",max);

printf("minNum=%d\n",min);

while(max != min)

{

if(max > min)

max = max - min;

else

min = min - max;

}

printf("%d",max);

return 0;

}

时针与分针夹角

#include<stdio.h>

int main()

{

int a,b;

char c,d;

float t1,t2;

double ans;

printf("Please input time(e.g: 5h43m)\n");

scanf("%d %c%d %c",&a,&c,&b,&d);

if(a < 0 || a > 12 || b < 0 || d > 60)

{

scanf("%d %c%d %c",&a,&c,&b,&d);

}

t1 = (float)a;

t2 = (float)b\*6;

t1 = t1\*30 + (float)b\*0.5;

ans = fabs(t1 - t2);

if(ans > 180)

ans = 360 - ans;

printf("At %d:%02d the angle is %.1f degrees.\n",a,b,ans);

return 0;

}

简单计算器

#include<stdio.h>

int main()

{

float a,b;

char m,n;

printf("Please enter the expression:\n");

scanf("%f %c%f",&a,&m,&b);

if(m=='+')

printf("%f + %f = %f\n",a,b,a+b);

else if(m=='-')

printf("%f - %f = %f\n",a,b,a-b);

else if(m=='\*')

printf("%f \* %f = %f\n",a,b,a\*b);

else if(m=='/'&&b!=0)

printf("%f / %f = %f\n",a,b,a/b);

else if(m=='/'&&b==0)

printf("Division by zero!\n");

else

printf("Unknown operator!\n");

for(;n != 'n' ||n!='N';)

{

printf("Do you want to continue(Y/N or y/n)?");

scanf(" %c",&n);

if(n == 'n' || n == 'N')

{

break;

}

printf("Please enter the expression:\n");

scanf("%f %c%f",&a,&m,&b);

if(m=='+')

printf("%f + %f = %f\n",a,b,a+b);

else if(m=='-')

printf("%f - %f = %f\n",a,b,a-b);

else if(m=='\*')

printf("%f \* %f = %f\n",a,b,a\*b);

else if(m=='/'&&b!=0)

printf("%f / %f = %f\n",a,b,a/b);

else if(m=='/'&&b==0)

printf("Division by zero!\n");

else

printf("Unknown operator!\n");

}

return 0;

}

相亲数

#include<stdio.h>

#define N 10000

int main()

{

int i,j,k; unsigned s[N];

for(i=2;i<N;i++) for(j=1,s[i]=0;j<i;j++) if(i%j==0) s[i]+=j;

for(i=2;i<N;i++)

{

j=s[i];

if(j>N) continue;//①

if(i==s[j]&&j>i)

{

printf("相亲数：%d,%d\n",i,j);

printf("%d 的真因数之和为：%d",i,1);

for(k=2;k<i;k++) if(i%k==0) printf("+%d",k); printf("=%d\n",j);

printf("%d 的真因数之和为：%d",j,1);

for(k=2;k<j;k++) if(j%k==0) printf("+%d",k); printf("=%d\n",i);

}

}

}

金字塔

#include <stdio.h>

int main(void)

{

int n,i,b,c,d;

char ch='A',a;

printf("Please input a capital:\n");

scanf("%c",&a);

n = a - 64;

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

{

ch='A';

for(b=0;b<=n-i;b++)

{

putchar(32);

}

for(c=0;c<i;c++)

{

printf("%c",ch++);

}

ch--;

for(d=0;d<i-1;d++)

{

printf("%c",--ch);

}

printf("\n");

}

return 0;

}

编写程序，打印输出如下图所示的乘法九九表：

打印九九乘法表

#include<stdio.h>

int main()

{

int a,b,c,n,d,e;

printf("Input n:\n");

scanf("%d",&n);

for(d = 1; d <= n; d++)

{

printf("%4d",d);

}

printf("\n");

printf(" ");

for(e = 1; e <= n; e++)

{

if(e == n)

printf("-");

else

printf("- ");

}

printf("\n");

for(a = 1; a <= n; a++)

{

for(b = 1; b <= 4\*a - 4; b++)

{

printf(" ");

}

for(c = a; c <= n; c++)

{

printf("%4d",a\*c);

}

printf("\n");

}

}

求解不等式

#include <stdio.h>

#include <math.h>

int main()

{

int i, m;

double s, n;

printf ("Input n:\n");

scanf ("%lf", &n);

for (m=1; m<=10000; m++)

{

s=0;

for (i=m; i<=2\*m; i++)

{

s+=sqrt(i);

}

if (s>n)

break;

}

printf ("Result:m>=%d\n", m);

printf ("s=%.2f\n", s);

return 0;

}