問1

#include <stdio.h>

#include <math.h>

struct triangle {

double a,b,c;

};

double calculate\_length(struct triangle);

double calculate\_area(struct triangle);

int main(){

struct triangle t;

double area;

printf("三角形の三篇の長さを入力: ");

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

area = calculate\_area(t);

printf("三角形の面積 = %lf\n",area);

return 0;

}

double calculate\_length(struct triangle t){

double length;

length = t.a + t.b + t.c;

return length;

}

double calculate\_area(struct triangle t){

double area;

double s;

s = calculate\_length(t);

area = sqrt((s-t.a)\*(s-t.b)\*(s-t.c));

return area;

}

結果

三角形の三篇の長さを入力: 12 12 12

三角形の面積 = 117.575508

問２

#include <stdio.h>

#include <math.h>

struct point{

double x,y;

};

struct rect{

struct point p1;

struct point p2;

};

double calculate\_length(struct rect \*);

int main(){

struct rect r;

double length;

printf("長方形の左下の点を入力: ");

scanf("%lf %lf",&r.p1.x,&r.p1.y);

printf("長方形の右上の点を入力: ");

scanf("%lf %lf",&r.p2.x,&r.p2.y);

length = calculate\_length(&r);

printf("長方形の対角線長 = %lf\n",length);

return 0;

}

double calculate\_length(struct rect \*rp){

double dx;

double dy;

double length;

dx = rp->p2.x - rp->p1.x;

dy = rp->p2.y - rp->p1.y;

length = sqrt(dx\*dx+dy\*dy);

return length;

}

結果

長方形の左下の点を入力: 0 0

長方形の右上の点を入力: 2 2

長方形の対角線長 = 2.828427