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