# Programming Design Worksheet - Redfield
## for CS1310 (programs 2-7) and CS1311 (programs 1-6)

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First name: Davide     Last name: Russillo

Design for program name: Triangle

## DATA
double side_a
double side_b
double side_c
double s
double area

## Formulas
s = 1/2 * (a + b + c)
A = sqrt(s * (s-a) * (s-b) * (s-c))

## Graphic

```
        #
   a   #   #   b
     #         #
   # # # # # # #
         c
```

## Algorithm to PSEUDOCODE level for each function

(*remember to indent under* if, switch, while, do-while, for)

**main:**

print(instructions... input side lengths)

input side_a

input side_b

input side_c

if(a <= 0 || b || 0 || c <= 0) {

print(invalid lengths)

} else if(a + b <= c || a + c <= b || b + c <= a) {

print(not a triangle)

} else {

      print(side_a, side_b ,side_c are the inputs)

{


s = 1/2 * (a + b + c)

area = sqrt(s * (s-a) * (s-b) * (s-c))


print(the area of your triangle is $area)