```
1 /***************************************************************************
2  * AUTHOR       : Saul Moreno
3  * STUDENT ID   : 269491
4  * ASSIGNMENT#5 : Abstract Class
5  * CLASS        : CS1C
6  * SECTION      : MW 5:00pm
7  * DUE DATE     : 3/2/20
8  ***************************************************************************/
9
10 #ifndef TRIANGLE_H_
11 #define TRIANGLE_H_
12
13 #include "Shape.h"
14 #include "Math.h"  // sqrt & pow functions
15
16 class Triangle: public Shape
17 {
18     public:
19
20     double CalcPerimeter(double a, double b, double c)
21     {
22         return tPerimeter = (a + b + c) / 2.0;
23     }
24     double CalcArea(double d, double e, double f)
25     {
26         bSqrt = tPerimeter*(tPerimeter-d)*(tPerimeter-e)*(tPerimeter-f);
27         return tArea = sqrt(bSqrt);
28     }
29     void Print()
30     {
31         std::cout << "Perimeter of the triangle is " << std::fixed
32                   << std::setprecision(2) << Triangle::tPerimeter
33                   <<
34         std::endl << "The area of the triangle is " << std::fixed
35                   << std::setprecision(2) << Triangle::tArea;
36     }
37
38     private:
39     double tPerimeter; // CALC & OUT - Holds the value of the perimeter
40     double tArea;      // CALC & OUT - Holds the value of the area
41     double bSqrt;      // CALC      - The value before it is square rooted
42
43
44 };
45
46 #endif /* TRIANGLE_H_ */
47
```