

Triangle Class

In this project you will perform calculations with triangles. A Triangle object consists of 3 Point objects. You will have to design and implement your own point class.

Compute the following properties of a given triangle

- The lengths of all the sides
- The angles at all the corners in degrees.
- The perimeter
- The area (I suggest Heron's Formula)
- The circumcenter
- The centroid
- The orthocenter

You will implement a Triangle class with the constructors and all of the appropriate methods. Also supply a program that prompts a user for the corner point coordinates and produces a nicely **formatted table** of the triangle properties.

You will also need a TriangleTester Class/Method for troubleshooting and testing purposes. Keep all of your code that you used to test/check methods. Comment the code that you no longer need.

Complete the classes in the following order

1. LinearEQ Class
2. Point Class – we'll make our own objects with our own associated methods
3. TriangleTester Class/Method
4. Triangle Class
5. UserInterface Class

Here are some helpful links that might aid in the mathematical aspects of your projects:

<http://calculator.tutorvista.com/centroid-calculator.html>

<http://calculator.tutorvista.com/circumcenter-calculator.html>