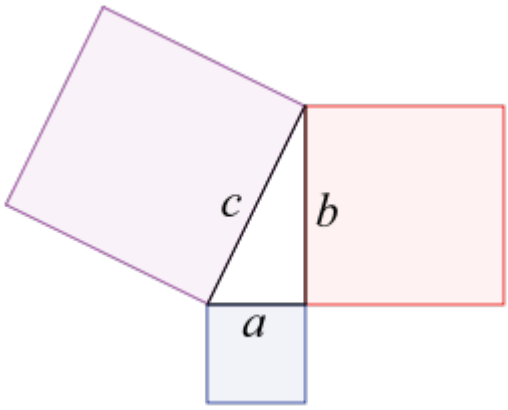
CS 2412 - Assignment #1: Pythagorean Triangle (60 points)

Overview

In this assignment, you are asked to find Pythagorean triangles that each of their sides are not longer than 500. You are expected to use classes, properties, and control statements in your application.

Introduction

A right triangle can have sides whose lengths are all integers. The set of three integer values for the lengths of the sides of a right triangle is called a Pythagorean triple (http://en.wikipedia.org/wiki/Pythagorean_triple). The lengths of the three sides must satisfy the relationship that the sum of the squares of two of the sides is equal to the square of the hypotenuse.



The Pythagorean theorem: $a^2 + b^2 = c^2$

Assignment

Write an app to find all Pythagorean triples for *a*, *b* and the *c*, all no larger than500. Use a triple-nested for loop that tries all possibilities. This method is an example of “bruteforce” computing.

Hint: You might need to use Math.Pow(double, double) or Math.Sqrt(double) to calculate the square of the sides or the hypotenuse.

Notes

- Due: Friday, January 23th at 11:59pm
- Submit your entire Visual Studio solution directory as a .zip file on Canvas.