Do not use any built-in functions and arrays unless specified otherwise. Create a Visual Studio solution for this test. For each problem, create a console application project. Sentinel-Controlled Loop (50%)

Create a console application that prompts you to enter integers continuously until you have entered **the same number three times in a row** (this condition will be our **sentinel**). We may assume that all the integers we've entered lie between -32,767 and 32,767 (e.g., **short** 16-bit integers) so that we can use an **int** data type for our calculations. The application will perform the following tasks.

1) Count the number of *Pythagorean triples* of any three numbers entered in a sequence,
   a. such that the square of one number is exactly the same as the sum of two other squares.
   b. A **Pythagorean Triple** is any three given integers—a, b, c— such that $a \times a = b \times b + c \times c$ or $b \times b = a \times a + c \times c$ or $c \times c = a \times a + b \times b$.
   c. For example, the sequence—3, -5, and 4—is a Pythagorean Triple.
2) Identify the **largest hypotenuse** from all the Pythagorean triples found.
   a. A *hypotenuse* is defined to be the **largest** **absolute** **number** in a Pythagorean Triple.
   b. For example, the *Pythagorean Triple*—3, -5, and 4—has a *hypotenuse* of 5.
3) Sum up all the numbers (including all the sentinel values [i.e., 3 repeated values]) that are not part of any Pythagorean triples. **(BONUS)**
4) The application will end when the user has entered three repeated numbers continuously.

When the app has ended, the app will display the following numbers:

a) the *number of Pythagorean triples* from Task 1,
b) the *largest hypotenuse* from Task 2, and
c) the *sum of NON-Pythagorean triples* from Task 3 **(BONUS)**.

See the table for a working example.

Inputs	Notes
3	First Number
4	Second Number
5	Triple (3, 4, 5)
12	
13	Triple (5, 12, 13)
5	Triple (12, 13, 5)
4	
3	Triple (5, 4, 3)
-5	Triple (4, 3, -5)
4	Triple (3, -5, 4)
7	*Non-Triple*
-17	*Largest Hypotenuse*
15	
8	Triple (-17, 15, 8)
6	
10	Triple (8, 6, 10) [Sentinel]
10	*Non-Triple* [Sentinel]
10	*Non-Triple* [Sentinel]
$Triples = 8$	
$Hypotenuse = 17$	
$Sum = 7 + 10 + 10 = 27$	