The purpose of this homework is to gain experience using loops.

The sum of the squares of the first 10 positive integers is
$$1^2 + 2^2 + \_\_\_ + 10^2 = 385:$$

On the other hand, the square of the sum of the first 10 positive integers is
$$(1 + 2 + \_\_\_ + 10)^2 = 55^2 = 3025:$$

Therefore, the difference between the square of the sum and the sum of the squares of the first 10 positive integers is 3025 - 385 = 2640

Requirements

Write a program that prompts the user for a positive integer, reads a single integer n, and then prints out:

- The square of the sum of the first n positive integers.
- The sum of the squares of the first n positive integers.
- The difference between the square of the sum and the sum of the squares.
- Use pow(n,2) to calculate the square of a value n. For example: pow(3,2) will give you 3^2
- Your program should run continuously until user enters -1.
- Make sure you have your name and Bronco ID at the top of your code
  ```
  /*    Name: Jane-Joe
  *     Bronco ID: 12345678
  *     Sources of Help:  Jon Doe helped me with…………
  */
  ```
- Your output prompts should be similar to this. Highlighted values are the user input.

  Enter a positive integer: **10**
  The square of the sum of the first 10 positive integers is 3025.
  The sum of the squares of the first 10 positive integers is 385.
  Their difference is 2640.

  Enter a positive integer: **15**
  The square of the sum of the first 15 positive integers is 14400.
  The sum of the squares of the first 15 positive integers is 1240.
  Their difference is 13160.

  Enter a positive integer: **-1**
  Not a positive integer. Program Terminates! Bye

Due: July 05, 2018 by 11.59 PM. submit your source.cpp file to Blackboard.

Total Points = 10 pts