

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.
- 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: November 01, 2017 by 6.00 PM. submit your HW3.java file to Blackboard.

Total Points = 100

- Code complies to requirements: 70 points
- Good coding style: 20 points
- Correctness/Robustness: 10 points