Lab Assignment 1

In this assignment you are to write a program to solve the following problem. As with all lab assignments, remember the following submission steps:

- Make sure your code passes at least all the provided JUnit tests
- Save, commit, and push all code changes
- Confirm the latest code is visible via the "Files" section of your repository website
- Confirm that the repository is private, and that the instructor has Developer access
- Note: you do **NOT** need to document your code

Problem a (`LA1a.java`)

Write a program to compute the sum, mean, and population standard deviation of a list of 5 numbers. First, have the user supply five numbers via the keyboard. For example: 1 2 3 4 5

Then, compute the **sum** of the numbers. In this case: 1 + 2 + 3 + 4 + 5 = 15

The **mean** is another word for the simple average: 15 / 5 = 3

To calculate the population standard deviation takes a few steps. First, for each inputted value, compute the difference between the mean and that number: (1-3) = -2, (2-3) = -1, (3-3) = 0, (4-3) = 1, (5-3) = 2

Then, add up the *square* of these differences: $(-2)^2 + (-1)^2 + (0)^2 + (1)^2 + (2)^2 = 4 + 1 + 0 + 1 + 4 = 10$

Then divide this sum by the number of inputs: 10 / 5 = 2

And finally take the square root: $\sqrt{2} \sim 1.41$

So, an example run of your program, given the above sample inputs, would look like the following:

```
Enter five numbers: 1 2 3 4 5
Sum: 15.00
Mean: 3.00
Population Standard Deviation: 1.41
```

You should express the sum, mean, and population standard deviation using exactly two decimal places (rounding where necessary).