**Assignment 1**

I Have read the lab guide.

**Self Check Exercises**

1. #4 on pg 137

The difference between final double CM\_PER\_INCH = 2.54; and public static final double CM\_PER\_INCH = 2.54; is that the public static final double will be a global constant recognized throughout the program whereas the final double will be a local constant only recognized within the scope of the method or part of the program where it is defined

1. #7 on pg 142

In the case that this is an integer type the value of 1729 / 100 = 172, whereas 1729 % 100 = 9

1. #10 on pg 142

When cast (long) x is used the variable is simply cast as a long and it gets rid of the decimal information. For example if x was 1.7 the cast (long) x would make x = 1. Using the Math.round(x) method though would round this to the nearest integer. In the case of x = 1.7 the result after using Math.round(x) would be 2

1. #11 on pg 142

If you wanted to round double x to the nearest int value assuming it is less than 2 x 10^9 you would have use the statement 🡪 (int) Math.round(x)

1. #14 on pg 151

If s = “Agent” the statement s = s + s.length would produce the result s = Agent5

1. #15 on pg 151

If String river = “Mississippi”

The value of river.substring(1,2) = i

The value of river.substring(2, river.length() – 3) = ssissip

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| --- | --- | --- | --- |
| **Tests** | **Expected Output** | **Actual Output** | **Solution** |
| User decides to use the red x to exit the program without selecting any of the available buttons | The program exits | Program advances to next window |  |
| User enters both 0 and as weight and height | Error | Error | Create an if-else statement to be able to bypass the BMI calculator and simply ask them if they want to start again |
| User enter 0 as a weight and a regular height | Error | Error | Same as above |
| User enters a negative weight or height | Error | Error | Same as above |
| User only enters one digit and no height (Eg 1) | Error | Program fails and exits | Create and if statement on the divider in the program which carries the place of ',' within the string. If that is less than 1 then display an error message and ask the user if they want to go again |









