Self-Assessment #1

Math 213W: Math with Mathematica

Your Name Here:

Questions:

(1) In a paragraph, explain the command **Flatten** to someone learning *Mathematica*. Make sure to explain what it does, and discuss the syntax of the command, including inputs and outputs. Make sure you address what the optional second input does.

(2) Write the *Mathematica* code that will create a variable named "countdown" to be the list of numbers `{10,9,8,7,6,5,4,3,2,1,0}`. You must use either a **Table** or **Range** command.

(3) What will be output by *Mathematica* when the following set of commands is evaluated? Explain why you give the answer you give.

```
fibowhat = {1, 1, 2, 3, 5, 8, 13, 21};
Total[fibowhat[[4 ;; 7]]]
```

(4) Write three sentences to explain what the percent sign (%) is used for.

(5) Below is the *Mathematica* input and output for someone hoping to make a list of square numbers and then append the next square number to the end of that list. How should the code be modified to do these two desired operations?

```
squares = Table[i^2, {5}]
Append[6^2, squares]
```

$\left\{i^2, i^2, i^2, i^2, i^2\right\}$

Append::normal : Nonatomic expression expected at position 1 in Append[36, {i², i², i², i², i²}]. »

$\text{Append}\left[36, \left\{i^2, i^2, i^2, i^2, i^2\right\}\right]$