Lab Exercises 8

1. Calculate the N50 for an assembly given that it has 7 contigs of length: (1 point) Please give a number
   1, 1, 3, 5, 5, 15, 20

2. Calculate the N50 for an assembly given that it has 7 contigs of length: (1 point) Please give a number
   1, 1, 3, 8, 9, 9, 9, 20

3. Say you wrote a function that adds two numbers called addtwo numbers and takes two arguments. Write an assertion statement that would check if the function is working correctly (1 point). Please provide one line of code

4. What does this code output using a version of python 2? (1 point) Please return a number
   ```python
def get_at_content(dna):
    length = len(dna)
    a_count = dna.count('A')
    t_count = dna.count('T')
    at_content = (a_count + t_count) / length
    return at_content
print(str(get_at_content("ACCGTTAAGGATGC")))
```

5. What does that same code output using a version of python 3? (1 point) Please return a number

6. What is the line you should add to the code to make the python 2 version match the python 3 version? (1 point) Please provide one line of code

7. Change that code to output a number with only 2 decimal places.(1 point) Please provide the altered code

8. Make a function called "getreindex" that accepts a DNA sequence in an argument called "dna" and an restriction enzyme as an argument called re. The function should return the index of the re in the dna. (3 points) Please return code of ~3-4 lines, just the function

   Here is some code to get you started. The sequences are just an example, you should make the function generic (ie able to accept any sequences):
my_dna = "ACTGATCGATTACGTATAGTAGAATTCTATCATACATATATATCGATGCATTTACAT"
index = my_dna.find("GAATTC")