Reminders

Google is your friend.

Exercises

Write programs in the editor window to perform each of the following tasks.

1. Print ‘Hello, IQ Biology!’
2. Define a variable pi to be 3.14159, a variable radius to be the radius of some circle, and a variable area to be the area of this circle.
3. Find the sum of the integers from 1 to 100.
   a. This can be done with a for loop or a while loop.
   b. If you want a list of these integers try 1:100.
4. Filter the list of integers from 1 to 100 to include only those that are less than 10 or even.
   a. The function mod(a, b) might be useful here. It returns the remainder after dividing a by b: mod(5, 2) = 1.
   b. To add a value v to the end of a list L use L = [L v].
5. Write a function called sumList that takes in a list and returns the sum of the values it holds.
6. Write a function called sumDivis that takes two lists. The function should return the sum of all values in the first list that are divisible by at least one values from the second list.
7. Write a function to find the average of the values in a list. Use your sumList function.
8. Write a function to find the maximum and minimum values in a list.
9. Write a function nthFib(n) that computes the nth Fibonacci number iteratively.
   a. nthFib(0) = 0, nthFib(1) = 1, and nthFib(n) = nthFib(n-1) + nthFib(n-2).
10. Write a function that returns true if the given number is prime and false otherwise.
11. Find the sum of the first 100 Fibonacci numbers.
12. Find the sum of all prime numbers less than 100.
13. Generate a list X of integers from 1 to 10 and a list Y of their corresponding cubes.
   a. Plot these points with a connecting line.
   b. Plot the points only.
   c. Plot these points with the line y = x on the same set of axes.
   d. Make sure to label each graph appropriately. Also include a legend for part (c).
14. Graph a function of your choice. Label the graph appropriately.