**Decision making and description (Sinh(x))**

**Decision making**

There are possible ways for implementing the HyperbolicSine class. During the possible ways, I choosed to implement it step by step as different functions.

So the formula for the Sinh(x) is . For the implementation faze, as the first function, is calculated. Then as the second function, is implemented and in the final function, the total answer is calculated. This ways is chosen because it is easier to be followed by a reader. Then setter and getter for the class attributes are implemented.

**Pseudocode**

The pseudocode for the implementation is as follows:

Input: e as Euler number and a real or complex number as x

Output: the result of Sinh(x)

expPositive = e \*\* x

expNegative = e \*\* -x

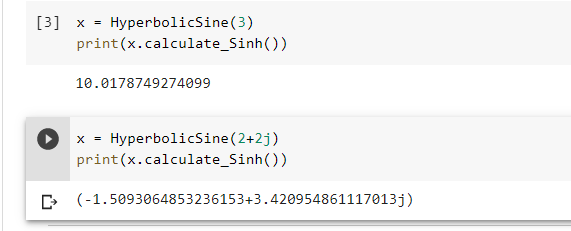
numerator = expPositive – expNegative

return (numerator/2)

The time and space complexity of the algorithm O(1).

**Test**

As it can be seen in the following photo, the test has been done on two variable x. The first one is a real variable and the second one is the complex variable.



**Task**

Compute the multiplication of Sinh(2.5) with Sinh(3), and add the result to Sinh(2+2j) using the Sinh(x) Function((Sinh(2.5)\*Sinh(3)) + Sinh(2+2j)).