**myMath-**

**the tasks written by:**

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**myMath**

I have 2 main classes in my project and its fields are:

Monom – Its shape : ax^b. a = coefficient (can be Double) and b=power(Integer only)

Polynom- Its arrayList of Monoms.

**MONOM constructors: (3 total) 1. Gets a,b. 2. Copy 3. Gets a string represent monom .**

**MONOM functions:**

1.add/subtract monoms.

2.calculate specific f(x)

3.derivative.

4.multiply monoms.

5. equals- check if two monoms are equals.

6.isZero- check if a given monom is a zero monom.

7.to string - return a string represent a monom.

**POLYNOM CLASS:**

**POLYNOM constructors: (2 total) 1. Default 2. Gets a string represent Polynom .**

**POLYNOM functions:**

1.add monom to our polynom.

2.add polynom to our polynom.

3.substract two polynoms.

4.multiply two polynoms.

6.equals - check if two polynoms are logically equals.

7.check if the polynom is a zero monom(polynom0.

8.root-finds a root value of a polynom while given 2 values that 1 is positive and the other negative and eps which will make sure that we are eps close to the 0.

9.copy - create a deep copy of this Polynum.

10.derivative of the polynom.

11.area - Compute Riemann's Integral over this Polynom starting from x0, till x1 using eps size steps.

12.Iterator (of Monoms) over this Polynom.

13.f(x) - calculate f(x).

14.to string - return a string represent the Polynom.

In my implementation I treats all kind of cases according to the orders. Its mean exceptions, notes and documentations, private function when needed and sub-functions, and good math that closet to the theorem. Please read the javaDoc or the function note, I explain my code there.