/This project was built Caroline Jubran/

 <--The project is based on two main classes, Monom and Polynom, a helper class Monom_Comperator and a test class

*********/   CLASS MONOM/***********

<-------------This class represent a function of type a*x^b-------------->.

a - coefficient, of type double.

b - power, of type int.

There are 3 constructors:

.1empty constructor - construct a zero Monom (a = b = 0).

 .2initialize by string - construct a Monom from a string.

 .3copy constructor - construct a copy of a given Monom.

.4constructor- construct a new Monom and gives a value to it

/   Class functionalities are/

 .1add - add a Monom to a Monom.

 .2substract - substract a Monom from a monom.

 .3multiply - multiply a Monom by a Monom.

 .4f(x) - calculates the value of f for a given x.

 .5isEqual - test if a Monom is equal to a different Monom.

 .6derivative-calculates the derivative of the monom

7. getters and setters.

**********/   CLASS POLYNOM/*************

<---------------This class represenst a function of type a1*x^b1 + .. + a_n*x^b_n-------------->.

Every Polynom is a list of m0,m1,..,m_n Monom's.

There are 3 constructors:

1. empty constructor - construct a zero Polynom.

2. initialize by string - construct a Polynom from a given string.

3. copy constructor - construct a copy of a given Polynom.

/   Class functionalities are/

1. add(Monom) - add a Monom to a Polynom.
add(Polynom) - add a Polynom to a Polynom.

2. substract(Monom) - substract a Monom from a Polynom.
substract(Polynom) - substract a Polynom from a Polynom.

3. multiply(Monom) - multiply a Polynom by a Monom.
multiply(Polynom) - multiply a Polynom by a Polynom.
multiply(Polynom,Polynom) - multiply two Polynom.

4. f(x) - calculates a value of the Polynom for a given x.

5. derivative(x) - value of the derivative of x.

.6area - calculate the area of the Polynom between two points.

.7root - search if the Polynom has a root between two points.

.8iterator - iterate over the collection.

*******/   class Monom_Comperator/*************

This class implements Comperator interface of type Monom.

functionalities:

compare - compare between two Monom's.

*************/   Class test/**************

This class is used to test every functionality of the project