This project was built by Amir Adar & Ido Elmaliah.

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:
          i. empty constructor - construct a zero Monom (a = b = 0).
          ii. initialize by string - construct a Monom from a string.
          iii. copy constructor - construct a copy of a given Monom.

      Class functionalities are:
          i. add - add a Monom to a Monom.
          ii. substract - substract a Monom from a monom.
          iii. multiply - multiply a Monom by a Monom.
          iv. f(x) - calculates the value of f for a given x.
          v. isEqual - test if a Monom is logically equal to a
    different Monom.

          vi. derivative
          vii. 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:
          i. empty constructor - construct a zero Polynom.
          ii. initialize by string - construct a Polynom from a given
          string.

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

      Class functionalities are:
          i. add(Monom) - add a Monom to a Polynom.
              add(Polynom) - add a Polynom to a Polynom.
          ii. substract(Monom) - substract a Monom from a Polynom.
              substract(Polynom) - substrat a Polynom from a Polynom.
          iii. multiply(Monom) - multiply a Polynom by a Monom.
              multiply(Polynom) - multiply a Polynom by a Polynom.
              multiply(Polynom,Polynom) - multiply two Polynom.
          iv. f(x) - calculates a value of the Polynom for a given x.
          v. derivative(x) - value of the derivative of x.
          vi. area - calculate the area of the Polynom between two
          points.

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

viii. iterator - iterate over the collection.
        ix. area_graph – calculates the area under 'x' axis and above
        the function.
        x.   graph – graph the Polynom and show it on the screen.

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.