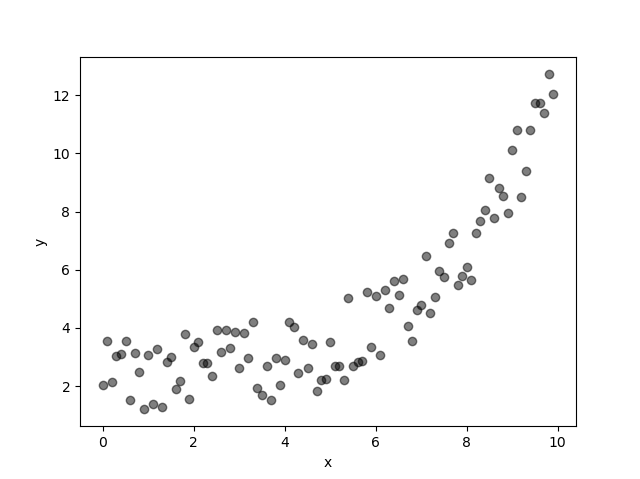
**Homework1**

Give the training set , . Please use the nonlinear model to find the regression parameter and which minimize the prediction error.



**Basic Requirement**

1. You must use **linear regression** to solve the nonlinear model.
2. You must use **variable transformation** (On the other hand, You need to create some variables which aren’t in the regression model).
3. Find the **original regression parameter and .**
4. **Draw the training set points with black color and draw nonlinear model with the and you found with red color.**

**Program Requirement**

1. If you use some program libraries which contain the algorithm logic about the homework, your score will be a lower than others.
2. Please attaching a readme.doc file which describes the progam langauge you used, e.g. the name, the version, the enviroment, the IDE etc.

**Attaching .zip file**

1. The program file (if more than one, put them in a folder).
2. A readme.doc file which describes the progam langauge you used.
3. A homework1.doc file which must contain the program execution screenshot and a simple description of your implementation.
4. A picture with the training set points with black color and draw nonlinear model with the α and β you found with red color.
5. Compress above 4 items into a ZIP file using the same name as your student NO. Upload this compressed file to Moodle.

**Resource**

The training set is attached on moodle. Its file name is **hw1\_data.csv**. The first column represents . The second column represents . The first row is the name of each column.

**Notice**

The score is based on the degree of your program implementation which written by yourself.