**Home Assignment Least Squares**

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| --- | --- |
| **x** | **y** |
| -3 | -1 |
| -2.5 | -0.7 |
| -2 | 0.2 |
| -1.5 | 1.5 |
| -1 | 2.1 |
| -0.5 | 3.2 |
| 0 | 3.5 |
| 0.5 | 3.6 |
| 1 | 3.3 |
| 1.5 | 3.6 |
| 2 | 4.2 |
| 2.5 | 5.7 |

* Fit the following data using 3 models given below ( by solving the system in matrix form (AX=B) and by using standard Python functions (curve\_fit)).
* Print parameters of each model.
* Plot the qiven data (dots) and the model data (solid line) on the same graphica window. Curves for all models should be plotted in one graphical window.
* Calculate residuals for all models and compare obtained results. What model is the best?
* Estimate values of and at the point . Show obtained values on the same graph.