(Q-1.2) c) ii). [Plots were on the previous page].

→ Variation of Sigma.

- Sigma basically represents the neighborhood that we take around our target point. So, a larger sigma implies a bigger neighbourhood.
- For sigma = 1, the neighborhod is really small, and as we can see, the model is overfitting on the data (High Variance)
- For sigma = 100, the neighborhood is really large and the model is underfitting on the data (High bias).
- For sigma = 10, We observe that the model fits just perfectly to the data.

→ Variation of lambda.

- Higher the lambda, more will be the regularisation penalty, and the variance of the model will decrease (more bias).
- At lambda = 0.1, the model fits the data just perfectly, but as we increase lambda, the regularisation penalty forces the model to decrease its degrees of freedom, and hence, for higher lambda's the curve that is fit, by our model is more rigid / more linear as compared to lower lambdas.