

Part 2:

Q1

Optimal Value for Ridge is 2

Lasso is 10

There are no changes to the predictors

- LotArea-----Lot size in square feet
- OverallQual-----Rates the overall material and finish of the house
- OverallCond-----Rates the overall condition of the house
- YearBuilt-----Original construction date
- BsmtFinSF1-----Type 1 finished square feet
- TotalBsmtSF----- Total square feet of basement area
- GrLivArea-----Above grade (ground) living area square feet
- TotRmsAbvGrd----Total rooms above grade (does not include bathrooms)
- Street\_Pave-----Pave road access to property
- RoofMatl\_Metal----Roof material\_Metal

Predictors are same but the coefficient of these predictor has changed

Q2

The  $r^2$ \_score of ridge is slightly higher than ridge for the test dataset so we will choose ridge regression to solve this problem

### Question 3

five most important predictor variables :

GrLivArea

1stFlrSF

RoofMatl\_Metal

Street\_Pave

RoofStyle\_Shed

**Question 4 :** The model should be accurate for datasets other than the ones which were used during training. We should ensure that is not overfitting