***(MACHINE LEARNING WORKSHEET-6 )***

ANSWER-1) D)

ANSWER-2) B)

ANSWER-3) C)

ANSWER-4) A)

ANSWER-5) D)

ANSWER-6) A), D)

ANSWER-7) C)

ANSWER-8) A)

ANSWER-9) B)

# ANSWER-10)

[R-squared](https://statisticsbyjim.com/glossary/r-squared/) tends to reward you for including too many independent variables in a [regression](https://statisticsbyjim.com/glossary/regression-analysis/) model, and it doesn’t provide any incentive to stop adding more. Adjusted R-squared and predicted R-squared use different approaches to help you fight that impulse to add too many. The protection that adjusted R-squared and predicted R-squared provide is critical because too many terms in a model can produce results that you can’t trust. These [statistics](https://statisticsbyjim.com/glossary/statistics/) help you include the correct number of independent variables in your regression model.

ANSWER-11) Similar to the lasso regression, ridge regression puts a similar constraint on the coefficients by introducing a penalty factor. However, **while lasso regression takes the magnitude of the coefficients, ridge regression takes the square**. Ridge regression is also referred to as L2 Regularization.

ANSWER-12) A variance inflation factor (VIF) is a measure of the amount of multicollinearity in regression analysis. [Multicollinearity](https://www.investopedia.com/terms/m/multicollinearity.asp) exists when there is a correlation between multiple independent variables in a multiple regression model. This can adversely affect the [regression](https://www.investopedia.com/terms/r/regression.asp) results. Thus, the variance inflation factor can estimate how much the variance of a regression coefficient is inflated due to multicollinearity.

The default VIF cutoff value is 5; only variables with a VIF less than 5 will be included in the model. However, note that many sources say that a VIF of **less than 10** is acceptable.

ANSWER-13) **To ensure that the gradient descent moves smoothly towards the minima and that the steps for gradient descent are updated at the same rate for all the features**, we scale the data before feeding it to the model.

ANSWER-14) There are three error metrics that are commonly used for evaluating and reporting the performance of a regression model; they are: **Mean Squared Error (MSE).** **Root Mean Squared Error (RMSE).** **Mean Absolute Error (MAE)**