Assignement- d2 Question and answers

1. 21 When implementing linear regression of some dependent variable y on the set of independent variables $\mathbf{x} = (x_1, \ldots, x_r)$, where r is the number of predictors, which of the following statements will be true?
   a) $\beta_0, \beta_1, \ldots, \beta_r$ are the regression coefficients.
   b) Linear regression is about determining the best predicted weights by using the method of ordinary least squares.
   c) E is the random interval
   d) Both and b
   Answer- d- Both a and b as in ML – Equation : Y=Ax+C
2. 22.What indicates that you have a perfect fit in linear regression
   Answer- d- The value $R^2 = 1$, which corresponds to SSR = 0
3. 23.In simple linear regression, the value of what shows the point where the estimated regression line crosses the y axis
   Answer- B0- intercept.
4. 24.Check out these four linear regression plots:
   Answer- D- Top left plot –as there is data points on regression line that means it is underfit
   (a)- 1st plot is underfit
5. 25.There are five basic steps when you're implementing linear regression:
   Answer- D- d) d, b, e, a, c
6. 26. Which of the following are optional parameters to LinearRegression in scikit-learn
   Answer- Fit & reshape.
7. 27) While working with scikit-learn, in which type of regression do you need to transform the array of inputs to include nonlinear terms such as x^2?
   Answer- c) Polynomial regression
8. 28) You should choose statsmodels over scikit-learn when:
   Answer- b) You're working with nonlinear terms.
9. 29) _____ is a fundamental package for scientific computing with Python. It offers comprehensive mathematical functions, random number generators, linear algebra routines, Fourier transforms, and more. It provides a high-level syntax that makes it accessible and productive
   Answer-b-Numpy
10. 30) _____ is a Python data visualization library based on Matplotlib. It provides a high-level interface for drawing attractive and informative statistical graphics that allow you to explore and understand your data. It integrates closely with pandas data structures
    Answer- b-Seaborn