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 betrue?

Answer---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

22) What indicates that you have a perfect fit in linear regression?

Answer---d) The value $R^2 = 1$, which corresponds to SSR = 0

23) In simple linear regression, the value of what shows the point where the estimated regression linecrosses the y axis?

Answer--- a) Y

24) Check out these four linear regression plots:

Which one represents an underfitted model?

Answer---d) The top-left plot

25) There are five basic steps when you're implementing linear regression:

- a. Check the results of model fitting to know whether the model is satisfactory.
- b. Provide data to work with, and eventually do appropriate transformations.
- c. Apply the model for predictions.
- d. Import the packages and classes that you need.
- e. Create a regression model and fit it with existing data

However, those steps are currently listed in the wrong order. What's the correct order?

Answer---d) d, b, e, a, c

26) Which of the following are optional parameters to LinearRegression in scikit-learn?

Answer--- f) reshape

27) While working with scikit-learn, in which type of regression do you need to transform the array ofinputs to include nonlinear terms such as x^2?

Answer---c) Polynomial regression

28) You should choose statsmodels over scikit-learn when:

b) **Answer---**You need more detailed results.

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---Numpy

30)_____is a Python data visualization library based on Matplotlib. It provides a high-levelinterface for drawing attractive and informative statistical graphics that allow you to explore and understand your data. It integrates closely with pandas data structures.

Answer---Seaborn