21. When implementing linear regression of some dependent variable y on the set of independent variables x = (x1, ..., xr), where r is the number of predictors, which of the following statements will be true?

ans: d. both a and b

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

ans. d) The value R2 = 1, which corresponds to SSR = 0

23. In simple linear regression, the value of what shows the point where the estimated regression line crosses the y axis?

ans: b) B0

24. Check out these four linear regression plots:

Which one represents an underfitted model?

ans: 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?

ans. d) d, b, e, a, c

26. Which of the following are optional parameters to Linear Regression in scikit-learn?

ans: **b) fit_intercept**

c) normalize

d) copy_X

e) n_jobs

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 x2?

ans: c) Polynomial regression

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

ans: c) 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.

ans: b) NumPy

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.

ans: a) Seaborn