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?

Ans. Both a and b are correct

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

Ans. 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 line crosses the y axis?

Ans. Y intercept

24. Check out these four linear regression plots:

Ans. A. the top-left one

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

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

26. Which of the following are optional parameters to LinearRegression 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 x^2?

Ans. c) Polynomial regression

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

Ans. b) You're working with nonlinear terms

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. b) Seaborn