

21. When implementing linear regression of some dependent variable y on the set of independent variables $\mathbf{x} = (x_1, \dots, x_r)$, where r is the number of predictors, which of the following statements will be true?

Answer - d) Both a and b

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 line crosses the y axis?

Answer - b) B_0

24. Check out these four linear regression plots:

Which one represents an under fitted model?

Answer - a) The bottom-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 - b) `fit_intercept`, d) `copy_X` and 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 ?

Answer - c) Polynomial regression

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

Answer - A) You want graphical representations of your data

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 - d) scipy

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