

Q21. 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 :- Linear regression is about determining the **best predicted weights** by using the **method of ordinary least squares**

Q22. What indicates that you have a perfect fit in linear regression?

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

Q23. In simple linear regression, the value of what shows the point where the estimated regression line crosses the y axis?

Answer : - B_0

Q24. Which one represents an underfitted model?

Answer :- The top-left plot

Q25. There are five basic steps when you're implementing linear regression:

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

Q26. Which of the following are optional parameters to Linear Regression in scikit-learn?

Answer :-

- `fit_intercept`
- `normalize`
- `copy_X`
- `n_jobs`

Q27. 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 :- Polynomial regression

Q28. You should choose stats models over scikit-learn when:

Answer :- You need more detailed results

Q29. _____ 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

Q30. _____ 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 :- Seaborn