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

Ans : β_0 , β_1 , ..., β_r are the regression coefficients.

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

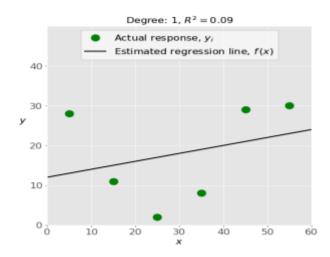
Ans: The value $R^2 = 1$, which corresponds to SSR = 0

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

Ans: B0

24) Which one represents an underfitted model?

Ans: 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, 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 : Polynomial regression
28) You should choose statsmodels over scikit-learn when: Ans: 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 : 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 : Seaborn