MCQ

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?

D) Both statements a) and b) are true when implementing linear regression.

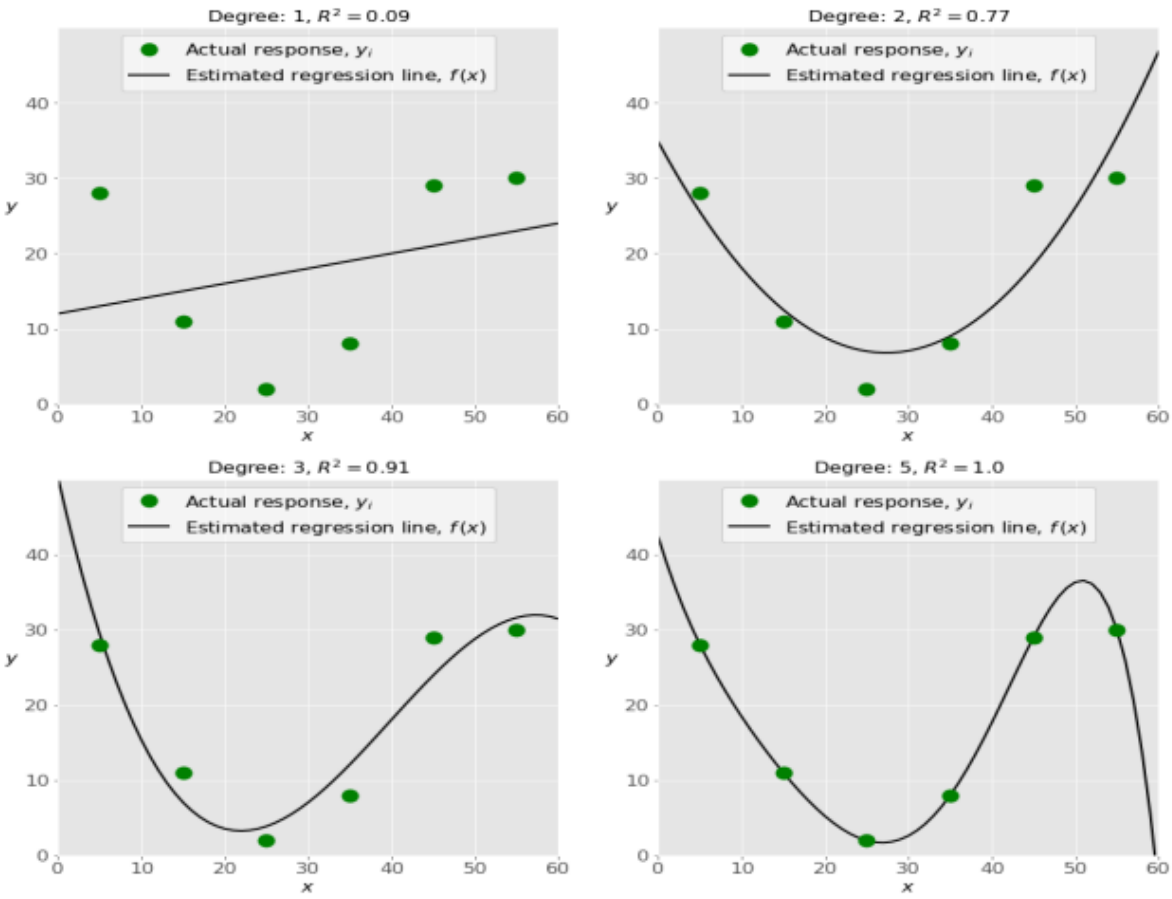
22. What indicates that you have a perfect fit in linear regression?

D) The value R^2 = 1, which corresponds to SSR = 0, indicates that you have a perfect fit in linear regression.

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

B) B0 (also known as the intercept) shows the point where the estimated regression line crosses the y-axis.

24. Check out these four linear regression plots:



Which one represents an underfitted model?

D) The top-left plot, R^2 = 0.09 in an underfitted model as it has low R^2 value!

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

D) d, b, e, a, c

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

The optional parameters to LinearRegression in scikit-learn are:
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?

C) Polynomial regression.

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

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.

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.

B) Seaborn