Simple Linear Regression [MCQ] (Version : 0)

TEST

Correct Answer

Answered in 86.7 Minutes

Question 1/8

In the equation below, what does _p_ represent?

y = px + q

- [x] _p_ is the slope, or gradient, of the linear model.
- [ ] _p_ is the y-intercept of the linear model.
- [ ] _p_ is an unknown quantity.
- [ ] _p_ is the x-intercept of the linear model.

Question 2/8

In the equation below, what does _q_ represent?

y = px + q

- [ ] _q_ is the slope, or gradient, of the linear model.
- [x] _q_ is the y-intercept of the linear model.
- [ ] _q_ is the x-intercept of the linear model.

- [ ] _q_ is an unknown quantity.

Question 3/8

What is true about the slope of the function below?

$y = 4x + 3$

- [ ] For an increase of 2 units in the x-variable, y-increases by 1 unit.
- [x] For an increase of 1 unit in the x-variable, y-increases by 4 units.
- [ ] The x-variable has a negative relationship with the y-variable.
- [ ] When the value of the x-variable is 0, the y-variable will be equal to 2

Question 4/8

What is true about the function below?

$y = 2x + 3$

- [ ] If we increase the x-variable by 2 units, the y-variable will increase by 1 unit.
- [x] When the value of the x-variable is 0, the y-variable will be equal to 3.
- [ ] When the value of the x-variable is 2, the y-variable will be equal to 0.
- [ ] The y-variable is always 3 units greater

than the x-variable.

Question 5/8

If we observe a point (3, 5.5), what is the residual (not the error) of this observation, with respect to the model below?

y = 2x + 3

- [ ] 3.5
- [x] -3.5
- [ ] -9.0
- [ ] 9.0

Question 6/8

When we are assessing the accuracy of the model, the following method is a measure of the proportion of variance explained by the model.

- [ ] RSS (Residual Sum of Squares)
- [x] R^2 (R-Squared)
- [ ] RMSE (Root Mean Square Error)
- [ ] RSE (Residual Standard Error)

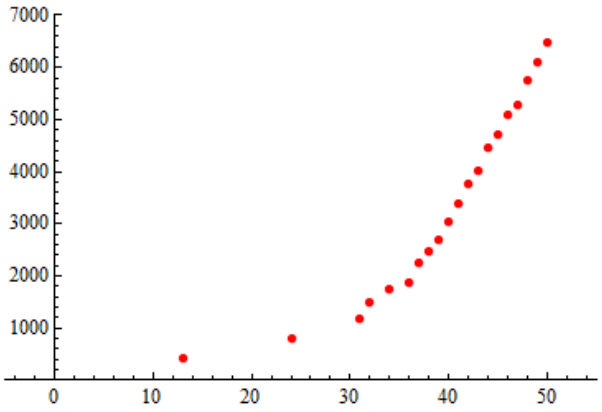
Question 7/8

Least squares is a method of fitting a regression line which is robust (i.e: safe from) outliers.

- [ ] True
- [x] False

Question 8/8

Refer to the figure below. A simple linear regression would be an appropriate method to model the data shown on this scatter plot



- [ ] True
- [x] False