X

Unit 8 - Week 6

Assignment 6

The due date for submitting this assignment has passed. Due on 2020-03-11, 23:59 IST.
As per our records you have not submitted this assignment.

1) The graph for the straight-line y=mx+b (m - slope, b - intercept) will have a upward slope when the value of ***1 point***

- m=0
- m>0
- m<0
- m≥0

No, the answer is incorrect.
Score: 0
Accepted Answers:
m>0

2) In the simple linear regression equation $y = 25.9 + 42x$, where the value 25.9 refers to ***1 point***

- intercept
- slope
- error
- prediction

No, the answer is incorrect.
Score: 0
Accepted Answers:
intercept

Based on the information given below answer the questions **3 and 4**
The total sales amount (y) and price for each model of toaster(x) was recorded.

Sales amount(US dollars)	Price of the product (US dollars)
7000	62
4000	48
6000	48
3000	40
7000	60
4500	50
5000	55

3) Given the following model equation $y = 173.48x - 3781.98$, the estimated sales amount for a 56-dollar toaster is ***1 point***

- 5933
- 7895
- 2500
- 4580

No, the answer is incorrect.
Score: 0
Accepted Answers:
5933

4) Given the following model equation $y = 173.48x - 3781.98$, the residual error when the price of the product is 62 dollars is given by ***1 point***

- 22.25
- 26.22
- 25.36
- 39.56

No, the answer is incorrect.
Score: 0
Accepted Answers:
26.22

5) The coefficient of determination formula is:- ***1 point***

- (SST / SSE) - 1
- 1 – (SSE / SSR)
- (SSR / SST) – 1
- 1 – (SSE / SST)

No, the answer is incorrect.
Score: 0
Accepted Answers:
1 – (SSE / SST)

6) Which of the following method is **NOT** appropriate to check the association between two continuous variables? ***1 point***

- Pearson's correlation
- Chi-square test
- Regression
- T-test

No, the answer is incorrect.
Score: 0

Accepted Answers:
Chi-square test

7) If the value of SSE is equal to zero, then **1 point**

- correlation is equal to 0
- correlation is less than 0
- coefficient of determination(R^2) must be equal to 1
- coefficient of determination(R^2) is equal to 0

No, the answer is incorrect.
Score: 0

Accepted Answers:
coefficient of determination(R^2) must be equal to 1

8) Which of the following is/ are **TRUE** with respect to Pearson's correlation(r_{xy})? **1 point**

- r_{xy} takes a value between 0 to +1
- A measure for the degree of linear dependence between two numerical variables
- Cannot be applied to ordinal variables
- r_{xy}= 0 means there is no correlation between x and y

No, the answer is incorrect.
Score: 0

Accepted Answers:
A measure for the degree of linear dependence between two numerical variables
Cannot be applied to ordinal variables
r_{xy}= 0 means there is no correlation between x and y

Based on the information given below answer the questions from **9 to 12**

Read the given dataset **Auto.csv** (https://drive.google.com/open?id=1HDojjo4uJRj6YP054xVmmcbb-TGocaWk) in R studio.

The data is about vehicle performance. The objective is to predict the miles per gallon given the weight of the car .

Variable	Description
mpg	Miles per gallon of the engine
weight	Weight of the car (lbs)

9) Correlation between mpg and weight is (round off to two decimal places) **1 point**

- 0.71
- -0.88
- 0.69
- 0.92

No, the answer is incorrect.
Score: 0

Accepted Answers:
-0.88

10) The linear model for the given data is **1 point**

- y= 0.0407+7.032x
- y=-0.00629+40x
- y=0.020+0.45784x
- y=40.56198-0.00629x

No, the answer is incorrect.
Score: 0

Accepted Answers:
y=40.56198-0.00629x

11) The second quartile residual value for the linear model built on the Auto.csv data is **1 point**

- -1.91568
- -7.2145
- -0.08124
- 1.73406

No, the answer is incorrect.
Score: 0

Accepted Answers:
-0.08124

12) From the regression model, the proportion of the variability explained in dependent variable by the independent variable is **1 point**

- 77%
- 12%
- 88%
- 42%

No, the answer is incorrect.
Score: 0

Accepted Answers:
77%