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Unit 5 - Week 3

Assignment 3

The due date for submitting this assignment has passed. Due on 2019-08-21, 23:59 IST.
As per our records you have not submitted this assignment.

1) The effect of sealer plate temperature and sealer plate clearance in a soap wrapping machine affects the percentage of wrapped bars that pass inspection. ***1 point***

Some data on these variables were collected and are shown below:

X_1 (Sealer plate clearance)	X_2 (Sealer Plate Temperature)	Y (% sealed properly)
130	190	35.0
174	176	81.7
134	205	42.5
191	210	98.3
165	230	52.7
194	192	82.0
143	220	34.5
186	235	95.4
139	240	56.7
188	230	84.4
175	200	94.3
156	218	44.3
190	220	83.3
178	210	91.4
132	208	43.5
148	225	51.7

Fit the model $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$. The least square estimate of β_1 is

- 0.906089

- 1.776580
- 5.623168

No, the answer is incorrect.
Score: 0
Accepted Answers:
0.906089

2) Consider the data in Problem 1. The least square estimate of β_2 is **1 point**

- 1.39674
- 2.80155
- -0.064122

No, the answer is incorrect.
Score: 0
Accepted Answers:
-0.064122

3) Consider the data in Problem 1. What is the degree of freedom of SS_{Res} **1 point**

- 12
- 13
- 14

No, the answer is incorrect.
Score: 0
Accepted Answers:
13

4) Consider the data in Problem 1. What is the degree of freedom of SS_{Reg} **1 point**

- 2
- 3
- 4

No, the answer is incorrect.
Score: 0
Accepted Answers:
2

5) Consider the data in Problem 1. $SS_{Reg} =$ **1 point**

- 1632.37339
- 2316.29008
- 6796.77105
- 8429.14444

No, the answer is incorrect.
Score: 0
Accepted Answers:
6796.77105

6) Consider the data in Problem 1. $SS_{Res} =$ **1 point**

- 1632.37339
- 2316.29008
- 6796.77105
- 8429.14444

No, the answer is incorrect.
Score: 0

Accepted Answers:
1632.37339

7) Consider the data in Problem 1. Approximately what proportion of the variability in Y remains unexplained **1 point**

- 30%
- 20%
- 10%
- 40%

No, the answer is incorrect.
Score: 0
Accepted Answers:
20%

8) Consider the data in Problem 1. Is the fitted model statistically significant? **1 point**

- yes
- no

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