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Unit 9 - Week 7

Course
outline

How to access
the portal

Pre-requisite
Assignment

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

- Model Adequacy Checking (Part A) (unit? unit=42&lesson=43)

- Model Adequacy Checking (Part

Assignment 7

The due date for submitting this assignment has passed. **Due on 2019-09-18, 23:59 IST.**
As per our records you have not submitted this assignment.

1) Let e_i be i th ordinary residual. Then

1 point

$$V(e_i) = \sigma^2(1 - h_{ii})$$

$$V(e_i) = \sigma^2$$

$$V(e_i) = \frac{\sigma^2}{(1 - h_{ii})}$$

$$V(e_i) = \frac{\sigma^2}{(1 - h_{ii})^2}$$

No, the answer is incorrect.
Score: 0

Accepted Answers:

$$V(e_i) = \sigma^2(1 - h_{ii})$$

2) Let $e_{(i)}$ be i th PRESS residual. Then

1 point

$$V(e_i) = \sigma^2(1 - h_{ii})$$

$$V(e_i) = \sigma^2$$

B) (unit?
unit=42&lesson=44)

Model
Adequacy
Checking (Part
C) (unit?
unit=42&lesson=45)

WEEK 7 -
FEEDBACK -
Regression
analysis (unit?
unit=42&lesson=46)

Assignment
Solution (unit?
unit=42&lesson=47)

Quiz :
Assignment 7
(assessment?
name=90)

Week 8

Week 9

Week 10

Week 11

Week 12

VIDEO
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$$V(e_i) = \frac{\sigma^2}{(1 - h_{ii})}$$

$$V(e_i) = \frac{\sigma^2}{(1 - h_{ii})^2}$$

No, the answer is incorrect.
Score: 0

Accepted Answers:

$$V(e_i) = \frac{\sigma^2}{(1 - h_{ii})}$$

3) The table below presents the diagonal element h_{ii} of the hat matrix while fitting a multiple linear regression model $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$ on 20 observations **1 point**

i	h_{ii}
1	.201
2	.059
3	.372
4	.111
5	.248
6	.129
7	.156
8	.096
9	.115
10	.110
11	.120
12	.178
13	.109
14	.148
15	.333
16	.095
17	.106
18	.197
19	.067
20	.050

Given that $SS_{Res} = 109.95$ and $e_{12} = 3.947$. The value of MS_{Res} is approximately equal to

- 6.467
 6.108
 5.786
 none of these

No, the answer is incorrect.
Score: 0

Accepted Answers:

6.467

4) Consider the data in Problem 3. The 12th standardised residual d_{12} is approximately equal to **1 point**

- 1.552
- 1.112
- 1.679
- 2.552

No, the answer is incorrect.

Score: 0

Accepted Answers:

1.552

5) Consider the data in Problem 3. The 12th studentized residual r_{12} is approximately equal to **1 point**

- 2.055
- 1.992
- 1.866
- 1.711

No, the answer is incorrect.

Score: 0

Accepted Answers:

1.711

6) Consider the data in Problem 3. Which of the following is most likely to be an outlying observation with respect to its X values **1 point**

- observation 13
- observation 3
- observation 10
- observation 5

No, the answer is incorrect.

Score: 0

Accepted Answers:

observation 3

7) Consider the data in Problem 3. The 12th press residual $e_{(12)}$ is approximately equal to **1 point**

- 4.801
- 4.533
- 4.429
- 5.112

No, the answer is incorrect.

Score: 0

Accepted Answers:

4.801

8) PRESS substantially larger than SS_{Res} indicates **1 point**

- fitted model is likely to predict new observation well
- fitted model is not likely to predict new observation well
- cannot say

No, the answer is incorrect.

Score: 0

Accepted Answers:

fitted model is not likely to predict new observation well

