CALIFORNIA STATISTICS · UNIT 4 · 10 QUESTIONS

Regression, Experiments, and Categorical Data — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Observed y = 15, predicted y = 20. The residual is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A regression line is ŷ = 40 - 5x. For x = 3, the predicted y is**

A 37

B 43

C 55

D 25

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3 **A chi-square test for independence tests whether two categorical variables are**

- A equal in mean
- B independent
- C linearly related
- D normally distributed

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4 **A conditional distribution in a two way table is computed within**

- A no group
- B one row or column
- C the sample size
- D the whole table only

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5 **Random assignment in an experiment helps to**

A remove all variation

B increase bias

C guarantee significance

D create similar groups

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6 **Replication in an experiment means**

A using many subjects or repeating treatments

B hiding the treatment

C using one subject only

D removing the control group

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7 **The least squares line minimizes the sum of squared**

- A intercepts
- B residuals
- C slopes
- D predicted values

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8 **Observed y = 25, predicted y = 30. The residual is**

- A 5
- B -5
- C 55
- D 0.83

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9 **A regression line is $\hat{y} = 12 + 2x$. For $x = 9$, the predicted y, is**

ANSWER _____

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10 **Observed $y = 60$, predicted $y = 52$. The residual is**

ANSWER _____

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ANSWER KEY

1.	-5	**5.**	D	**9.**	30
2.	D	**6.**	A	**10.**	8
3.	B	**7.**	B		
4.	B	**8.**	B		

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