MATHS

BOOKS - S CHAND MATHS (ENGLISH)

CORRELATION ANALYSIS

Multiple Choice Question

1. If $\sum x_i = 50, \sum y_i = -30, \sum x_i y_j = -115$ and n= 10, then covariance between x and y is

A. 3.5

B. -3.5

C. 2.5

D. 4.5

Answer: A

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2. Given, $n = 5, \Sigma x_i = 25, \Sigma y_i = 20, \Sigma x_i y_i = 90$ and $\Sigma x_i^2 = 135$, find the regression coefficient of y on x.

A. 3

B. -3

C. 2

D. -4

Answer: B

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3. If n= 12 and $\sum u_i v_i = 60$, where u_i and v_i are deviations of X and Y series from their respective means, then $cov(X, Y)$ is

A. 10

B. 7.5

C. 6

D. 5

Answer: D

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4. If $\Sigma(x_i - 2) = 10, \Sigma(y_i - 5) = 20, \Sigma x_i y_i = 148$ and $n = 5$, find cov (x, y)

A. -6.4

B. 6.4

C. -4.8

D. -3.2

Answer: A

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5. If $cov(X, Y) = 16.5, Var(X) = 8.25$ and $Var(Y) = 33$, then Karl Pearson's coefficient of correlation between X and Y is

A. $\frac{1}{2}$

B. $\frac{2}{3}$

C. $\frac{3}{4}$

D. 1

Answer: D

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6. IF

$cov(X, Y) = -8, Var(X) = 1.44$ and $Var(Y) = 100$

, then coefficient of correlation between X and Y is

A. $\frac{2}{3}$

B. $\frac{3}{4}$

C. $-\frac{3}{4}$

D. $-\frac{2}{3}$

Answer: D

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7. If coefficient of correlation between two variables X and Y is $0.64, cov(X, Y) = 16$ and $Var(X) = 9$, then the standard deviation of Y series is

A. 1.2

B. 8.33

C. 24

D. 25

Answer: B

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