Edulyte

ALGEBRA OF MATRICES

Mathematical structures made up of rows and columns of numbers and used to represent and solve systems of data analyses, linear equations, data structures, etc., are what we know as matrices. Matrices include entities that are clubbed in rows and columns and are represented as a rectangular range kept in brackets.

Read more

Q1: What is the determinant of a 2x2 matrix [a, b; c, d]?

A: ad - bc
B: ab - cd
C: ac - bd
D: bd - ac

Q2: The aggregate of two slanted matrices is:

A: A diagonal matrix
B: A scalar
C: The zero matrix
D: A vector

Q3: What is the scale of the identity matrix?

A: 0
B: 1
C: The number of rows or columns in the matrix
D: The number of non-zero elements in the matrix

Q4: Choose the correct option: A (3X2) * B (2X4)

A: A matrix of size 3x4
B: A matrix of size 2x2
C: A matrix of size 2x4
D: A matrix of size 3x2

Q5: Determinant of the matrix [4,7,-2,5] is:

A: 33
B: 30
C: 29
D: 22

Q6: Find the sum of matrices P and Q if P is symmetric and Q is skew-symmetric:

A: A skew-symmetric matrix
B: A symmetric matrix
C: A matrix with all zero entities
D: Neither symmetry nor skew-symmetric matrix

Q7: Find the rank of a zero matrix of size 3x3:

A: Cannot be determined
B: 1
C: 3
D: 0

Q8: Using what can you change two rows of a matrix?

A: Row swapping
B: Column swapping
C: Row scaling
D: Row Addition

Q9: What is implied by the zero determinant of a square matrix?

A: The matrix is invertible
B: The matrix is zero matrix
C: The matrix is singular
D: The matrix is scalar

Q10: Find its inverse if the matrix Y is orthogonal

A: The identity matrix
B: Scalar multiple of Y
C: Transpose of Y
D: A matrix with all zero entities

Answers

Q1: A - ad - bc

Q2: A - A diagonal matrix

Q3: C - The number of rows or columns in the matrix

Q4: A - A matrix of size 3x4

Q5: D - 22

Q6: C - A matrix with all zero entities

Q7: D - 0

Q8: A - Row swapping

Q9: C - The matrix is singular

Q10: C - Transpose of Y