

RIZ MUGHAL

QUIZ MASTER

Grand Quiz(MTH501)

100% correct solution.

For more information you can visit my channel and for any type of help related to CS619 you can contact me.



YOUTUBE CHANNEL:

<https://www.youtube.com/channel/UCINsFwDiB62SValCcPDZbRQ/playlists>

FACEBOOK GROUP:

<https://www.facebook.com/groups/923887914750307>

Question # 1 of 30 (Start time: 09:34:45 AM, 02 January 2021)

The matrix : $[x_p]$, where $1 \leq p < \infty$, is an example of - - - -matrix.

Select the correct option

[Reload](#)

<input type="radio"/>	Square
<input type="radio"/>	Singular
<input checked="" type="radio"/>	Column
<input type="radio"/>	Row

RIZ MUGHAL

MTH501:Grand Quiz

Question # 2 of 30 (Start time: 09:35:12 AM, 02 January 2021)

Inverse of a matrix is given by

Select the correct option



$$A^{-1} = \frac{1}{\det A} A^{-1}$$



$$A^{-1} = \frac{1}{\det A} \text{adj}(A)$$

RIZ MUGHAL

Question # 3 of 30 (Start time: 09:35:37 AM, 02 January 2021)

The System of equations : $y = 0$ and $x = 5$ has ---- solution(s).

Select the correct option



<input type="radio"/>	No
<input checked="" type="radio"/>	Unique
<input type="radio"/>	Infinite many
<input type="radio"/>	distinct multiple

RIZ MUGHAL

MTH501:Grand Quiz

Question # 4 of 30 (Start time: 09:36:08 AM, 02 January 2021)

Cramer's rule is a formula for solving systems of equations by _____.

Select the correct option

- | | |
|----------------------------------|------------------|
| <input type="radio"/> | matrix inversion |
| <input checked="" type="radio"/> | determinants |
| <input type="radio"/> | comparison |
| <input type="radio"/> | substitutions |

RIZ MUGHAL

MTH501:Grand Quiz

Question # 5 of 30 (Start time: 09:36:47 AM, 02 January 2021)

The Gaussian elimination procedure is one of several method to solve the

Select the correct option

- | | |
|----------------------------------|--------------------|
| <input checked="" type="radio"/> | Inverse of matrix |
| <input type="radio"/> | Determinant matrix |
| <input type="radio"/> | Procedure matrix |
| <input type="radio"/> | Eliminated matrix |

RIZ MUGHAL

Question # 6 of 30 (Start time: 09:37:12 AM, 02 January 2021)

Which of the following is an example of Matrix in reduced Echelon form?

Select the correct option

[Reload](#)

<input type="radio"/>	$\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$
<input type="radio"/>	$\begin{pmatrix} 0 & 0 \\ 1 & 1 \end{pmatrix}$
<input checked="" type="radio"/>	$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$
<input type="radio"/>	$\begin{pmatrix} 0 & 1 \\ 0 & 1 \end{pmatrix}$

Question # 7 of 30 (Start time: 09:37:33 AM, 02 January 2021)

Tot

Let $S = \{v_1, v_2, \dots, v_n\}$ be a set in V and let $H = \text{span} \{v_1, v_2, \dots, v_p\}$. Some subsets of S are basis for H if -----

Select the correct option

[Reload Math E](#)

- | | |
|----------------------------------|----------------|
| <input checked="" type="radio"/> | $H \neq \{0\}$ |
| <input type="radio"/> | $H = 0$ |

RIZ MUGHAL

Question # 8 of 30 (Start time: 09:38:17 AM, 02 January 2021)

Let A be a square $n \times n$ matrix, then which of the following statement(s) is(are) equivalent?

Select the correct option

- | | |
|----------------------------------|--|
| <input type="radio"/> | (a) A is an invertible matrix. |
| <input type="radio"/> | (b) A is row equivalent to the $n \times n$ identity matrix. |
| <input type="radio"/> | (c) A has n pivot positions. |
| <input checked="" type="radio"/> | (d) Options (a to c). |

Question # 9 of 30 (Start time: 09:38:34 AM, 02 January 2021)

Let A, B and C matrices are of same order and $(A + B) + C = A + (B + C)$, this law is known as

Select the correct option

Reloa

- | | |
|----------------------------------|------------------|
| <input type="radio"/> | Cramer's rule |
| <input type="radio"/> | Distributive law |
| <input type="radio"/> | Commutative law |
| <input checked="" type="radio"/> | Associative law |

RIZ MUGHAL

MTH501:Grand Quiz

Question # 10 of 30 (Start time: 09:38:55 AM, 02 January 2021)

If $\det(A) = 187$ then the Cramer's rule can be applicable because:

Select the correct option

- The coefficient matrix A is not invertible
- The coefficient matrix A is invertible
- The coefficient matrix A is scalar
- The coefficient matrix A is $m \times n$

RIZ MUGHAL

MTH501:Grand Quiz

Question # 11 of 30 (Start time: 09:39:09 AM, 02 January 2021)

Which of the following can refer a single term of an Algebraic expression?

Select the correct option

- | | |
|----------------------------------|--------------------------|
| <input type="radio"/> | $2x+3y$ |
| <input type="radio"/> | $2x-3y$ |
| <input checked="" type="radio"/> | $6xy$ |
| <input type="radio"/> | $(6x/y)$ such that $y=0$ |

RIZ MUGHAL

Question # 12 of 30 (Start time: 09:39:24 AM, 02 January 2021)

Which of the following system will have the trivial solution?

Select the correct option

- | | |
|----------------------------------|----------------|
| <input type="radio"/> | $x = y = 1$ |
| <input type="radio"/> | $x = 1, y = 0$ |
| <input type="radio"/> | $x = 0, y = 1$ |
| <input checked="" type="radio"/> | $x = y = 0$ |

Question # 13 of 30 (Start time: 09:39:46 AM, 02 January 2021)

Slope and y - intercept of the line : $2x + 3y = -1$ respectively.

Select the correct option

Relo

- | | |
|----------------------------------|-----------------------------------|
| <input checked="" type="radio"/> | $-\frac{2}{3}$ and $-\frac{1}{3}$ |
| <input type="radio"/> | $\frac{2}{3}$ and $-\frac{1}{3}$ |
| <input type="radio"/> | $-\frac{2}{3}$ and $\frac{1}{3}$ |
| <input type="radio"/> | $\frac{2}{3}$ and $\frac{1}{3}$ |

Question # 14 of 30 (Start time: 09:40:00 AM, 02 January 2021)

Total Marks: 1

As soon as an approximate solution of a linear system is sufficiently accurate for practical work then which of the following is true for an iterative process?

Select the correct option

- | | | |
|----------------------------------|---|----|
| <input checked="" type="radio"/> | The process may be stopped. | // |
| <input type="radio"/> | The process may be carried on. | // |
| <input type="radio"/> | The row-echelon method may be used. | // |
| <input type="radio"/> | The reduced row-echelon method may be used. | // |

MTH501:Grand Quiz

Question # 15 of 30 (Start time: 09:40:17 AM, 02 January 2021)

Which of the following property does not hold for matrix multiplication?

Select the correct option

<input type="radio"/>	Associative
<input type="radio"/>	Distributive
<input checked="" type="checkbox"/>	Commutative
<input type="radio"/>	Additive inverse

RIZ MUGHAL

Question # 16 of 30 (Start time: 09:40:35 AM, 02 January 2021)

If one row of A is multiplied by k to produce B, then which of the following condition is true?

Select the correct option

- | | |
|----------------------------------|-------------------------------|
| <input type="radio"/> | $\det(AB) = (\det A)(\det B)$ |
| <input checked="" type="radio"/> | $\det B = k \det A$ |
| <input type="radio"/> | $\det B = - \det A$ |
| <input type="radio"/> | $\det B = \det A$ |

RIZ MUGHAL

Question # 17 of 30 (Start time: 09:40:54 AM, 02 January 2021)

$$\begin{pmatrix} \cos\theta & \sin\theta \\ -\sin\theta & \cos\theta \end{pmatrix}^{-1} =$$

Select the correct option

- | | |
|----------------------------------|---|
| <input type="radio"/> | $\begin{pmatrix} \cos\theta & \sin\theta \\ -\sin\theta & \cos\theta \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} -\cos\theta & \sin\theta \\ \sin\theta & \cos\theta \end{pmatrix}$ |
| <input type="radio"/> | $\begin{pmatrix} \cos\theta & \sin\theta \\ \sin\theta & -\cos\theta \end{pmatrix}$ |
| <input checked="" type="radio"/> | $\begin{pmatrix} \cos\theta & -\sin\theta \\ \sin\theta & \cos\theta \end{pmatrix}$ |

MTH501:Grand Quiz

Question # 18 of 30 (Start time: 09:41:11 AM, 02 January 2021)

All the lines those passes through origin are not the subspace of a plane.

Select the correct option

FALSE

TRUE

RIZ MUGHAL

MTH501:Grand Quiz

Question # 19 of 30 (Start time: 09:41:26 AM, 02 January 2021)

What is the maximum possible number of pivots in a '3 by 3' matrix ?

Select the correct option

- | | |
|----------------------------------|---|
| <input type="radio"/> | 0 |
| <input type="radio"/> | 1 |
| <input checked="" type="radio"/> | 3 |
| <input type="radio"/> | 5 |

RIZ MUGHAL

Question # 20 of 30 (Start time: 09:41:43 AM, 02 January 2021)

A linear equation in three variables always represent a ----- .

Select the correct option

<input type="radio"/>	Plane in \mathbb{R}^2 (2 – dimension)
<input type="radio"/>	Line in \mathbb{R}^2 (2 – dimension)
<input checked="" type="radio"/>	Plane in \mathbb{R}^3 (3 – dimension)
<input type="radio"/>	Line in \mathbb{R}^3 (3 – dimension)

Question # 21 of 30 (Start time: 09:42:02 AM, 02 January 2021)

A matrix in which each descending diagonal from left to right is constant is called a _____ matrix.

Select the correct option

- | | |
|----------------------------------|------------------------|
| <input checked="" type="radio"/> | diagonal-constant |
| <input type="radio"/> | block lower triangular |
| <input type="radio"/> | block upper triangular |
| <input type="radio"/> | diagonal |

Question # 22 of 30 (Start time: 09:42:17 AM, 02 January 2021)

Total Marks:

If both the Jacobi and Gauss-Seidel sequences converge for the solution of $Ax=b$, for any initial $x(0)$, then which of the following is true about both the solutions?

Select the correct option

- | | |
|----------------------------------|---------------------------|
| <input type="radio"/> | No solution |
| <input checked="" type="radio"/> | Unique solution |
| <input type="radio"/> | Different solutions |
| <input type="radio"/> | Infinitely many solutions |

MTH501:Grand Quiz

Question # 23 of 30 (Start time: 09:42:34 AM, 02 January 2021)

Any matrix A and its transpose have the same determinant.

Select the correct option

<input checked="" type="checkbox"/>	TRUE
<input type="checkbox"/>	FALSE

RIZ MUGHAL

MTH501:Grand Quiz

Question # 24 of 30 (Start time: 09:42:47 AM, 02 January 2021)

IF rank = number of unknowns and the equation $x=y=z=0$ have only _____ solution

Select the correct option

- | | |
|----------------------------------|-------------|
| <input type="radio"/> | Non Trivial |
| <input type="radio"/> | Infinite |
| <input type="radio"/> | Unique |
| <input checked="" type="radio"/> | Trivial |

RIZ MUGHAL

MTH501:Grand Quiz

Question # 25 of 30 (Start time: 09:43:10 AM, 02 January 2021)

If all the entries of a row or a column of a square matrix are zero, then $\det(A)$ will be _____

Select the correct option

- | | |
|----------------------------------|----------|
| <input checked="" type="radio"/> | zero |
| <input type="radio"/> | infinity |
| <input type="radio"/> | one |
| <input type="radio"/> | non zero |

RIZ MUGHAL

Question # 26 of 30 (Start time: 09:43:29 AM, 02 January 2021)

If $i = \sqrt{-1} \in \mathbb{C}$, and $n \in \mathbb{Z}^+$, then $\begin{pmatrix} i & 0 \\ 0 & i \end{pmatrix}^{4n} = \text{-----}$.

Select the correct option

[Relo](#)

$$\begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$$

$$\begin{pmatrix} -1 & 0 \\ 0 & 1 \end{pmatrix}$$

$$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$$

$$\begin{pmatrix} -1 & 0 \\ 0 & -1 \end{pmatrix}$$

MTH501:Grand Quiz

Question # 27 of 30 (Start time: 09:43:48 AM, 02 January 2021)

An $n \times n$ real matrix is invertible if and only if the span of the rows of A is \mathbb{R}^n

Select the correct option

<input checked="" type="checkbox"/>	True
<input type="checkbox"/>	False

RIZ MUGHAL

MTH501:Grand Quiz

Question # 28 of 30 (Start time: 09:44:03 AM, 02 January 2021)

Any set of linearly independent vectors cannot contain the ----- vector.

Select the correct option

<input checked="" type="radio"/>	zero
<input type="radio"/>	Identity
<input type="radio"/>	Unit
<input type="radio"/>	None of these

RIZ MUGHAL

Question # 29 of 30 (Start time: 09:44:19 AM, 02 January 2021)

Total M

If v_1, \dots, v_p are in R^n , then the set of all linear combinations of v_1, \dots, v_p is denoted by

Select the correct option

[Reload Math Equa](#)

<input checked="" type="checkbox"/>	subset of R^n spanned
<input type="checkbox"/>	Addition of Vectors

RIZ MUGHAL

Question # 30 of 30 (Start time: 09:44:41 AM, 02 January 2021)

Let V be a five dimensional vector space, and let S be a subset of V which spans V , then S

Select the correct option

 Reload

- | | |
|----------------------------------|--|
| <input type="radio"/> | Must be linearly dependent. |
| <input type="radio"/> | Must be basis for V |
| <input checked="" type="radio"/> | Must consist of at least five elements |
| <input type="radio"/> | Must have exactly five elements |