

Which of the following will be the Matrix Product corresponding to Linear Combination: $\begin{pmatrix} -2 \\ 5 \end{pmatrix} x + \begin{pmatrix} 3 \\ 1 \end{pmatrix} y$?

Select the correct option

☐	$\begin{pmatrix} 1 & -3 \\ -5 & -2 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$
☐	$\begin{pmatrix} -2 & 5 \\ 3 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$
☒	$\begin{pmatrix} -2 & 3 \\ 5 & 1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$
☐	$\begin{pmatrix} 3 & -2 \\ 1 & 5 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix}$

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Question # 2 of 30 (Start time: 08:04:12 AM, 01 July 2020)

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

Select the correct option

☐	Associative
☐	Distributive
☒	Commutative
☐	Additive inverse

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Question # 3 of 30 (Start time: 08:04:37 AM, 01 July 2020)

For the matrix: $A = \begin{pmatrix} 4 & x+2 \\ 2x-3 & 1 \end{pmatrix}$, if $A = A^t$, then $x = \dots$.

Select the correct option

☒	5
☐	5/2
☐	-5

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Question # 4 of 30 (Start time: 08:05:10 AM, 01 July 2020)

Which of the following is corresponding Matrix form of the Linear equation $x + y = 3$?

Select the correct option

☐	$x \begin{pmatrix} 1 \\ 0 \end{pmatrix} + y \begin{pmatrix} 0 \\ 1 \end{pmatrix} = 3 \begin{pmatrix} 1 \\ 0 \end{pmatrix}$
☐	$x \begin{pmatrix} 1 \\ 0 \end{pmatrix} + y \begin{pmatrix} 0 \\ 1 \end{pmatrix} = 3 \begin{pmatrix} 0 \\ 1 \end{pmatrix}$
☒	$x [1] + y [1] = 3 [1]$
☐	Can't be expressed in Matrix form

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Question # 5 of 30 (Start time: 08:06:05 AM, 01 July 2020)

Set $\left\{ \begin{pmatrix} 1 \\ 2 \end{pmatrix}, \begin{pmatrix} 0 \\ 0 \end{pmatrix} \right\}$ is Linearly ----- in $\mathbb{R}^2$.

Select the correct option

☐	Independent
☒	Dependent

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Question # 6 of 30 (**Start time: 08:06:30 AM, 01 July 2020**)

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

Select the correct option

- | | |
|----------------------------------|-------------------------------|
| ☐ | $\det(AB) = (\det A)(\det B)$ |
| ☒ | $\det B = k \det A$ |
| ☐ | $\det B = -\det A$ |
| ☐ | $\det B = \det A$ |

Solved by riz mughal

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Question # 7 of 30 (**Start time: 08:07:02 AM, 01 July 2020**)

If determinant of a matrix is zero then which of the following is true for that system?

Select the correct option



The inversion method applies.



The inversion method fails.

Question # 8 of 30 (Start time: 08:07:36 AM, 01 July 2020)

For the following system of Equations:

$$x + 2y = 0, 2x - y = 0;$$

which variable can be taken as free?

Select the correct option

☐	only x
☐	only y
☐	both x and y
☒	either x or y

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Question # 9 of 30 (Start time: 08:08:04 AM, 01 July 2020)

Suppose k is any scalar and $u = (u_1, u_2, \dots, u_n), v = (v_1, v_2, \dots, v_n) \in R^n$. then the distributive law states that

Select the correct option

☒	$K(u+v)=ku+kv$
☐	$k(u+v)=kuv$

Question # 10 of 30 (Start time: 08:08:29 AM, 01 July 2020)

Under which of the following condition, a system of Linear Equations whose Row - Reduce form is $\left(\begin{array}{cc|c} 1 & 2 & -1 \\ 0 & 0 & h - 3k \end{array} \right)$ has *Infinite* many solutions?

Select the correct option

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☒	$h = 3k$
☐	$h \neq 3k$
☐	$(h, k) = (0, 0)$

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Question # 11 of 30 (Start time: 08:09:06 AM, 01 July 2020)

Since vector $\begin{pmatrix} 2 \\ 3 \end{pmatrix}$ lies in the span $\left\{ \begin{pmatrix} 1 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 1 \end{pmatrix} \right\}$ then the vectors $\begin{pmatrix} 2 \\ 3 \end{pmatrix}, \begin{pmatrix} 1 \\ 0 \end{pmatrix}$ and $\begin{pmatrix} 0 \\ 1 \end{pmatrix}$ are Linearly ---

Select the correct option

☒	Dependent
☐	Independent

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Question # 12 of 30 (Start time: 08:09:38 AM, 01 July 2020)

The order of matrix $\begin{bmatrix} 2 & 1 & 3 \end{bmatrix}$ is

Select the correct option

☐	2-by-1
☐	2-by-3
☒	1-by-3
☐	3-by-1

Question # 13 of 30 (Start time: 08:10:20 AM, 01 July 2020)

Which of the following would be the Augmented Matrix associated with the system: $\begin{matrix} 2x = 1 \\ -2y = x \end{matrix}$?

Select the correct option

☐	$\begin{pmatrix} 2 & 1 \\ -2 & 1 \end{pmatrix}$
☐	$\left(\begin{array}{cc c} 2 & 0 & 1 \\ -1 & -2 & 1 \end{array} \right)$
☐	$\left(\begin{array}{cc c} 2 & 0 & 1 \\ 1 & -2 & 0 \end{array} \right)$
☒	$\left(\begin{array}{cc c} 2 & 0 & 1 \\ -1 & -2 & 0 \end{array} \right)$

Question # 13 of 30 (Start time: 08:10:20 AM, 01 July 2020)

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☐	$\left(\begin{array}{cc c} 2 & 0 & 1 \\ 1 & -2 & 0 \end{array} \right)$
☒	$\left(\begin{array}{cc c} 2 & 0 & 1 \\ -1 & -2 & 0 \end{array} \right)$

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Question # 14 of 30 (**Start time: 08:10:47 AM, 01 July 2020**)

Linear algebra is the study of linear sets of equations and their ----- properties.

Select the correct option

☐	non-linear
☒	transformation

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Question # 15 of 30 (Start time: 08:11:13 AM, 01 July 2020)

If an augmented matrix $[A \ b]$ has a pivot position in every row then

Select the correct option

- | | |
|----------------------------------|--|
| ☒ | The equation $Ax = b$ may or may not be consistent |
| ☐ | The equation $Ax = b$ may or may not be inconsistent |

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Question # 16 of 30 (Start time: 08:11:43 AM, 01 July 2020)

LU-factorization is a matrix decomposition which writes a matrix as the product of a _____ matrix and an upper triangular matrix.

Select the correct option

☐	diagonal
☐	null
☐	identity
☒	lower triangular

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Question # 17 of 30 (Start time: 08:12:08 AM, 01 July 2020)

If $A^t = A^{-1}$, then $|A| = - - -$.

Select the correct option

☐	0
☐	1
☐	-1
☒	± 1

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Question # 18 of 30 (Start time: 08:12:36 AM, 01 July 2020)

The three most important special cases of R^n are $x \in R$

Select the correct option

☒	R, R^2, R^3
☐	R, N

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Question # 19 of 30 (**Start time: 08:12:59 AM, 01 July 2020**)

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

☒	zero
☐	infinity
☐	one
☐	non zero

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Question # 20 of 30 (**Start time: 08:13:21 AM, 01 July 2020**)

Which of the following is the area of the parallelogram determined by the columns of A where A is a 2 x 2 matrix?

Select the correct option

- | | |
|----------------------------------|-------|
| ☐ | [A] |
| ☒ | det A |
| ☐ | det A |

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Question # 23 of 30 (Start time: 08:14:20 AM, 01 July 20

Inverse of a matrix is given by

Select the correct option

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

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Question # 27 of 30 (Start time: 08:15:45 AM, 01 July 2020)

$$|A|.|B| = |A.B|$$

Select the correct option

☒	TRUE
☐	FALSE

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Question # 28 of 30 (Start time: 08:16:08 AM, 01 July 2020)

Which of the following is NOT the axiom for vector space where u, v, w in V are set of vectors and l, m, n are scalars?

Select the correct option

- | | |
|----------------------------------|-----------------------------|
| ☐ | $u + (v + w) = (u + v) + w$ |
| ☒ | $u \cdot v = v \cdot u$ |
| ☐ | $ u + v = u + v $ |
| ☐ | $(l + m)u = lu + mu$ |

Solved by riz mughal

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Question # 30 of 30 (**Start time: 08:16:53 AM, 01 July 2020**)

Non square matrices do not have inverse

Select the correct option

☒	True
☐	False