



# MTH501 Grand QUIZ 2020 HADI (VUAnswer

Linear Algebra (Virtual University of Pakistan)



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# MTH501 GRAND QUIZ WITH HADI.

## MTH501 GRAND QUIZ 2020

**WELCOME TO HADI PAST PAPER**

CORRECT ANSWER SOLVED BY HADI  
CELL NO : +923228043306  
EMAIL : usmanraj20@gmail.com

Question # 2 of 30 ( Start time: 11:13:27 AM, 01 July 2020 )

Total Marks: 1

The values of  $x$  and  $y$  which satisfy the matrix equation:  $\begin{pmatrix} 4 \\ y \end{pmatrix} = x \begin{pmatrix} 2 \\ 3 \end{pmatrix}$  are - - - - .

Select the correct option

[Reload Math Equations](#)

<input type="radio"/>	$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 6 \\ 2 \end{pmatrix}$
<input type="radio"/>	$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 2 \\ 3 \end{pmatrix}$
<input type="radio"/>	$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$
<input type="radio"/>	$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 2 \\ 6 \end{pmatrix}$

[Click to Save Answer & Move to Next Question](#)

Question # 2 of 30 ( Start time: 12:04:38 PM, 01 July 2020 )

Total Marks: 1

Which of the following is Row - Equivalent of  $\begin{pmatrix} 3 & 2 \\ 1 & 2 \end{pmatrix}$ ?

Select the correct option

[Reload Math Equations](#)☐

$$\begin{pmatrix} 1 & 2 \\ 2 & 3 \end{pmatrix}$$

☐

$$\begin{pmatrix} 1 & 2 \\ 0 & 4 \end{pmatrix}$$

☐

$$\begin{pmatrix} 1 & 2 \\ -4 & 0 \end{pmatrix}$$

☐

$$\begin{pmatrix} 1 & 2 \\ 0 & -4 \end{pmatrix}$$

[Click to Save Answer & Move to Next Question](#)

Question # 4 of 30 ( Start time: 12:06:16 PM, 01 July 2020 )

Total Marks: 1

If all the elements of one row is '0' in a matrix A then which of the following about the determinant of the matrix is true?

Select the correct option

☐ $\det(A) = 0$ ☐ $\det(A) = 1$ ☐ $\det(A)$  is not equal to '0'☐ $\det(A)$  is not equal to '1'

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Question # 12 of 30 ( Start time: 12:13:38 PM, 01 July 2020 )

Total Marks: 1

The word algorithm comes from the famous Muslim mathematician

Select the correct option

☐

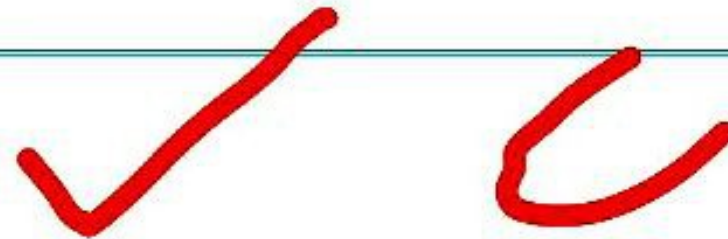
Omar Khayyam

☐

Al-Kindi

☐

Al-Khwarizimi

☐

None of these



Question # 9 of 30 ( Start time: 11:21:34 AM, 01 July 2020 )

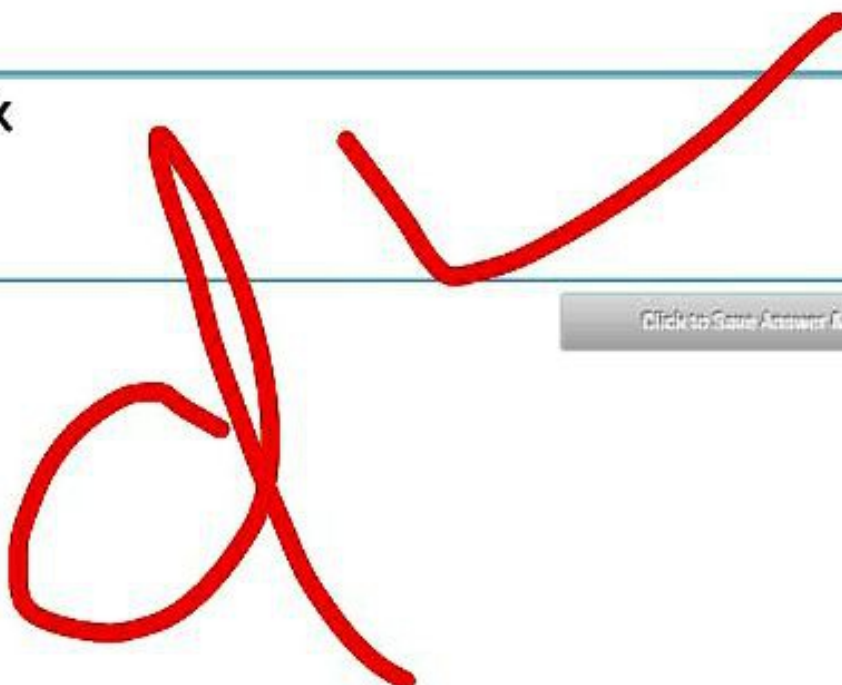
Total Marks: 1

Multiplication of a partitioned matrix by a scalar is also computed \_\_\_\_\_.

Select the correct option

- ☐ row by row
- ☐ column by column
- ☐ diagonal by diagonal
- ☐ block by block

Click to Save Answer & Move to Next Question





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Question # 8 of 30 ( Start time: 11:19:39 AM, 01 July 2020 )

Total Marks: 1

A system of linear equations is said to be homogeneous if the constant terms are all

Select the correct option

- ☐ One
- ☒ Zero
- ☐ Both (a) and (b)
- ☐ None of the above

Question # 1 of 30 ( Start time: 12:03:57 PM, 01 July 2020 )

Total Marks: 1

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

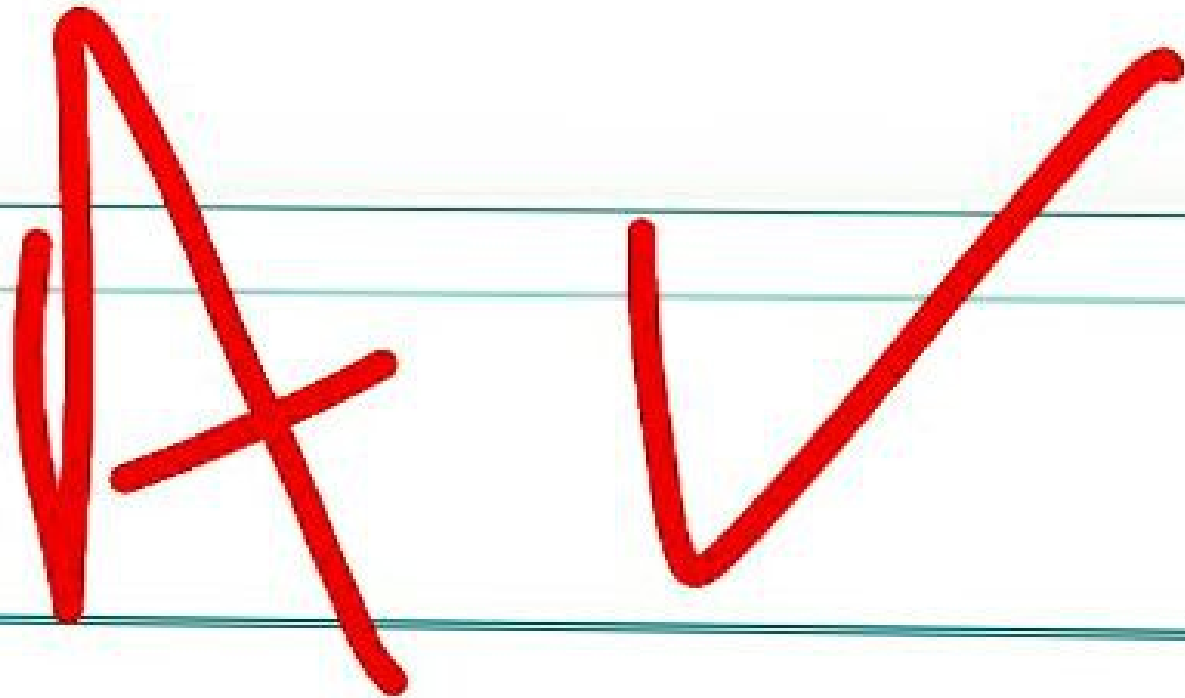
Select the correct option

☐

TRUE

☐

FALSE

A large handwritten red 'X' is drawn over the 'TRUE' option, and a large handwritten red checkmark is drawn over the 'FALSE' option, indicating that the statement is false.

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**WELCOME TO HADI PAST PAPER**

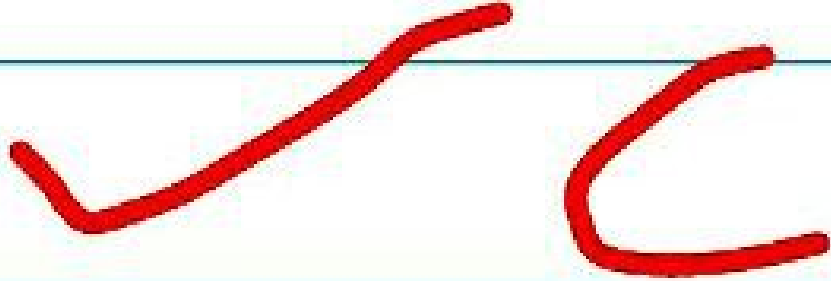
CORRECT ANSWER SOLVED BY HADI  
CELL NO : +923228043306  
EMAIL : usmanraj20@gmail.com

Question / 15 of 30 ( Start time: 01:08:01 PM, 01 July 2020 )

Total Marks: 1

Let A be the matrix of order  $3 \times 2$ , B be the matrix of order  $2 \times 4$  and C be the matrix of order  $4 \times 5$ ; then which of the following is the order of the matrix ABC?

Select the correct option

- |                                  |              |
|----------------------------------|--------------|
| <input type="radio"/>            | $3 \times 4$ |
| <input type="radio"/>            | $2 \times 2$ |
| <input checked="" type="radio"/> | $3 \times 5$ |
| <input type="radio"/>            | $2 \times 5$ |
- 

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Question # 5 of 30 ( Start time: 12:06:58 PM, 01 July 2020 )

Total Marks: 1

At what condition  $\det(AB)=(\det A)(\det B)$  is possible?

Select the correct option

- ☐ When A is a row matrix
- ☐ When A and B are  $m \times n$  matrices
- ☐ When B is a column matrix
- ☐ When A and B are  $n \times n$  matrices

Click to Save Answer | Move to Next Question



Question # 22 of 30 ( Start time: 11:38:58 AM, 01 July 2020 )

Total Marks: 1

The determinant of a diagonal matrix is the product of the diagonal elements.

Select the correct option

☐

TRUE

☐

FALSE

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Question # 17 of 30 ( Start time: 12:18:54 PM, 01 July 2020 )

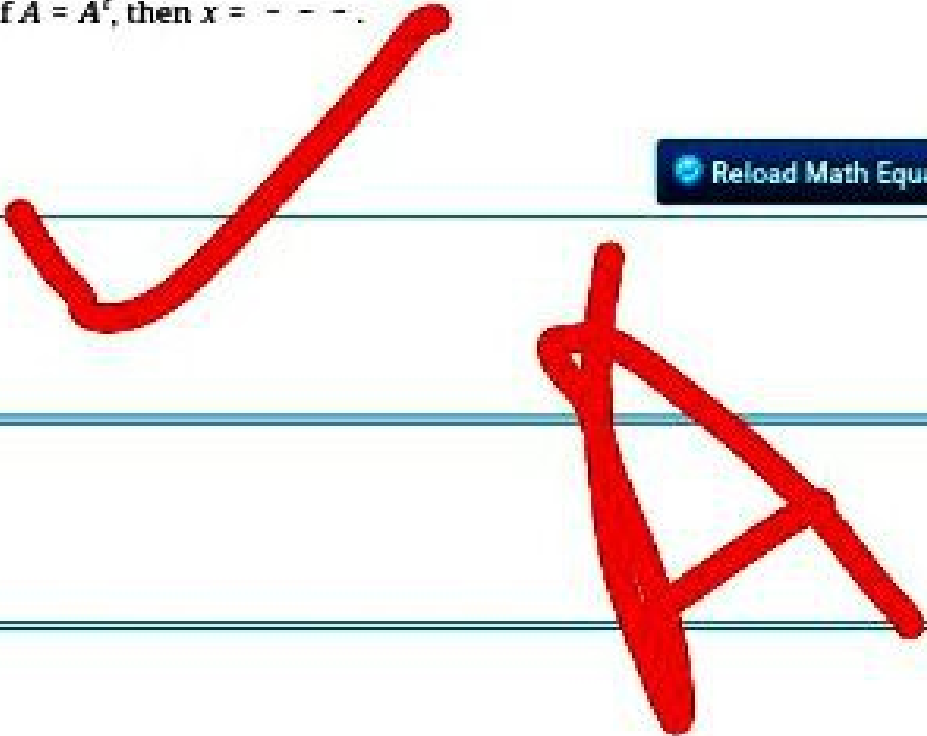
Total Marks: 1

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

 Reload Math Equations

<input type="radio"/>	5
<input type="radio"/>	5/2
<input type="radio"/>	-5
<input type="radio"/>	Undefined.



If  $M=[3]$  then which of the following is the determinant of the matrix  $M$ ?

Select the correct option

- ☐ 1
- ☐ [1]
- ☒ 3
- ☐ [3]

CV ✓

Click to Save Answer & Move to Next Question

Question # 4 of 30 ( Start time: 11:15:18 AM, 01 July 2020 )

Total Marks: 1

If  $\alpha = \beta$ , then  $\begin{vmatrix} \cos\alpha & \sin\alpha \\ \sin\beta & \cos\beta \end{vmatrix} = \dots\dots\dots$

Select the correct option

[Reload Math Equations](#)

<input type="radio"/>	$\cos 2\alpha$
<input type="radio"/>	$\sin 2\alpha$
<input type="radio"/>	1
<input type="radio"/>	$\infty$

Question # 21 of 30 ( Start time: 11:37:53 AM, 01 July 2020 )

Total Marks: 1

How many Pivot positions the matrix :  $\begin{pmatrix} 2 & 3 & 1 \\ 4 & 6 & 2 \end{pmatrix}$  will have?

Select the correct option

[Reload Math Equations](#)

<input type="radio"/>	1
<input type="radio"/>	2
<input type="radio"/>	3
<input type="radio"/>	4

B ✓

[Click to Get Answer & Move to Next Question](#)

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Question # 3 of 30 ( Start time: 11:14:19 AM, 01 July 2020 )

Total Marks: 1

Why inverse of the matrix  $A = \begin{bmatrix} 1 & 2 \end{bmatrix}$  is NOT possible?

Select the correct option

- ☐ Because it is a square matrix.
- ☐ Because it is a zero matrix.
- ☐ Because it is an identity matrix.
- ☐ Because it is a rectangular matrix.

[Click to Save Answer & Move to Next Question](#)

Let A be the matrix of order  $3 \times 2$ , B be the matrix of order  $2 \times 4$  and C be the matrix of order  $4 \times 5$ ; then which of the following is the order of the matrix ABC?

Select the correct option



$3 \times 4$



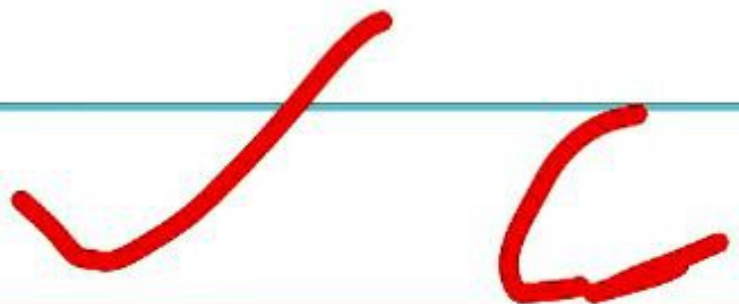
$2 \times 2$



$3 \times 5$



$2 \times 5$



Click to Save Answer & Move to Next Question

Question # 13 of 30 ( Start time: 12:14:21 PM, 01 July 2020 )

Total Marks: 1

A matrix whose all entries are zero is called ———

Select the correct option

☐ a) Unit matrix

☐ b) Null matrix

☐ c) Identity matrix

☐ (a) and (b)

✓ B

# MTH501 GRAND QUIZ WITH HADI.

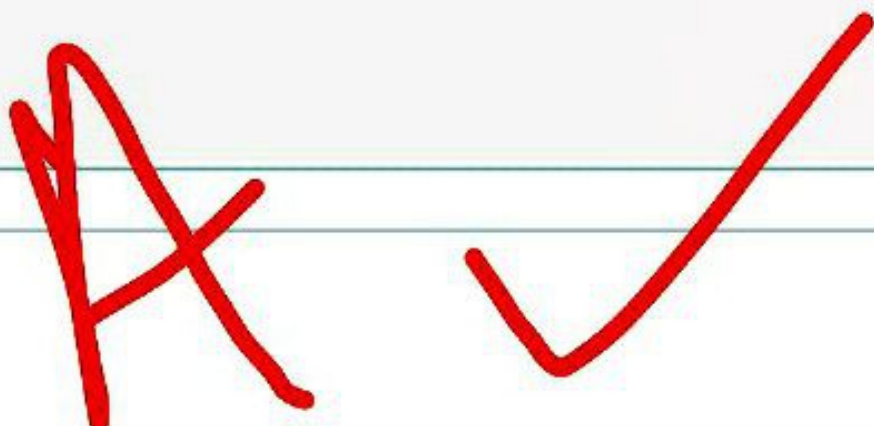
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If two rows or columns of a square matrix are identical, then  $\det(A)$  will be \_\_\_\_\_.  


Select the correct option

- ☐ zero
- ☐ non zero
- ☐ one
- ☐ positive

Click to Save Answer & Move to Next Question

Question 28 of 30 ( Start time: 01:23:16 PM, 01 July 2020 )

Total Marks: 1

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

Select the correct option

☐

TRUE

☐

FALSE

[Click to view Answer & Move to Next Question](#)



A decomposition of a matrix as a product of two or more matrices is called the matrix \_\_\_\_\_.



Select the correct option

<input type="radio"/>	composition
<input type="radio"/>	factorization
<input type="radio"/>	multiplication
<input type="radio"/>	transformation

✓ B



Question # 16 of 30 ( Start time: 01:47:54 PM, 01 July 2020 )

If A is not invertible matrix, then



Select the correct option

<input type="radio"/>	$\det(A)=1$
<input type="radio"/>	$\det(A)=0$ ✓ B
<input type="radio"/>	$\det(A) \neq 0$
<input type="radio"/>	$\det(A)=-1$

Question # 1 of 30 ( Start time: 11:12:10 AM, 01 July 2020 )

Total Marks: 1

A decomposition of a matrix as a product of two or more matrices is called the matrix \_\_\_\_.

Select the correct option

- ☐ composition
- ☐ factorization
- ☐ multiplication
- ☐ transformation

[Click to Save Answer & Move to Next Question](#)

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---

If the sum of two matrices A, and B is a zero matrix then A and B are said to be



Select the correct option

<input type="radio"/>	Multiplicative inverse of each other,
<input type="radio"/>	Additive inverse of each other, 
<input type="radio"/>	Transpose of each other,
<input type="radio"/>	Determinant of each other.

The determinant of a diagonal matrix is the product of the diagonal elements.

Select the correct option

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

✓ A



Question # 10 of 30 ( Start time: 01:40:46 PM, 01 July 2020 )

The matrix :  $[x_{1k}]$ , where  $1 \leq k < \infty$ , is an example of — — — — matrix.

Select the correct option

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

✓ B



Question # 17 of 30 ( Start time: 12:18:54 PM, 01 July 2020 )

Total Marks: 1

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

 Reload Math Equations

<input type="radio"/>	5
<input type="radio"/>	5/2
<input type="radio"/>	-5
<input type="radio"/>	Undefined.



**Question # 24 of 30 ( Start time: 01:59:09 PM, 01 July 2020 )**

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



**Select the correct option**



0



1



3



5

Question # 24 of 30 ( Start time: 11:41:32 AM, 01 July 2020 )

Total Marks: 1

The system of equations:  
 $x_1 = 0 = x_2$   
can be expressed in the form - - - - -.

Select the correct option

Revised Math Equations

☐

$$Ax = 0$$

☐

$$Ax = b$$

☐

$$\begin{aligned} Ax &= 0 \\ By &= 1 \end{aligned}$$

☐

$$\begin{aligned} Ax &= 1 \\ By &= 0 \end{aligned}$$

Question # 14 of 30 ( Start time: 12:15:13 PM, 01 July 2020 )

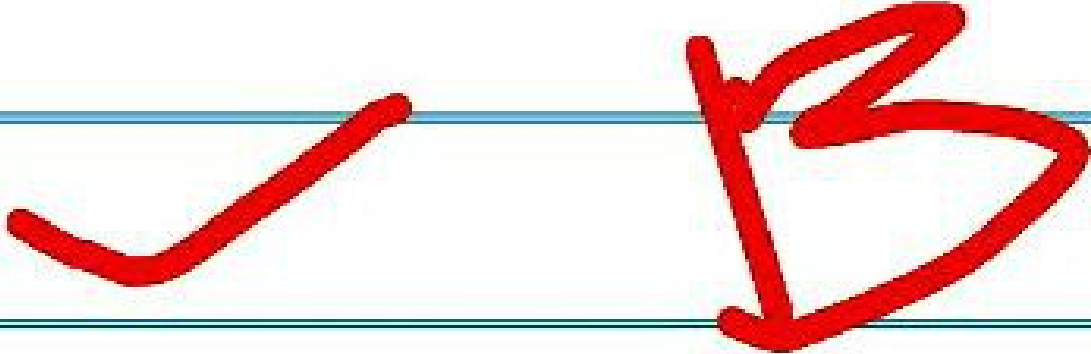
Total Marks: 1

The determinant of a square matrix  $A = \begin{bmatrix} 3 & 2 \\ 4 & 5 \end{bmatrix}$  is

Select the correct option

 Reload Math Equations

<input type="radio"/>	0
<input type="radio"/>	7
<input type="radio"/>	8
<input type="radio"/>	15



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Question # 14 of 30 ( Start time: 12:15:13 PM, 01 July 2020 )

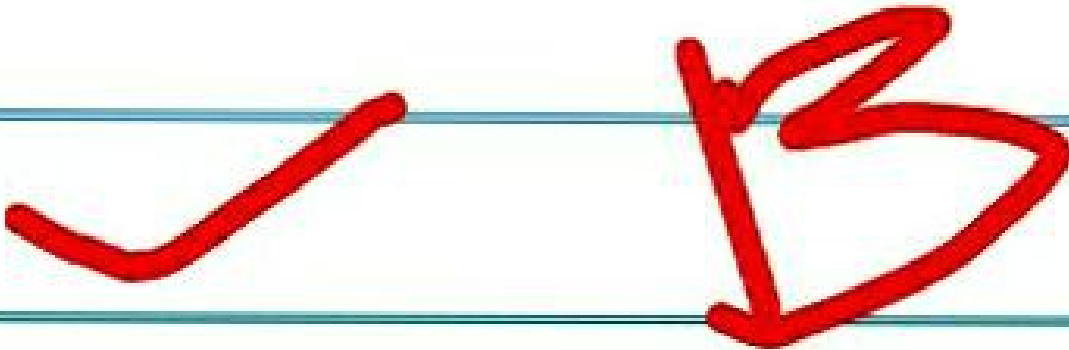
Total Marks: 1

The determinant of a square matrix  $A = \begin{bmatrix} 3 & 2 \\ 4 & 5 \end{bmatrix}$  is

Select the correct option

[Reload Math Equations](#)

<input type="radio"/>	0
<input type="radio"/>	7
<input type="radio"/>	8
<input type="radio"/>	15



Question # 6 of 30 ( Start time: 11:17:33 AM, 01 July 2020 )

Total Marks: 1

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

Select the correct option

[Reveal Math Equations](#)

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

Click to Save Answer &amp; Move to Next Question

Question # 11 of 30 ( Start time: 11:23:50 AM, 01 July 2020 )

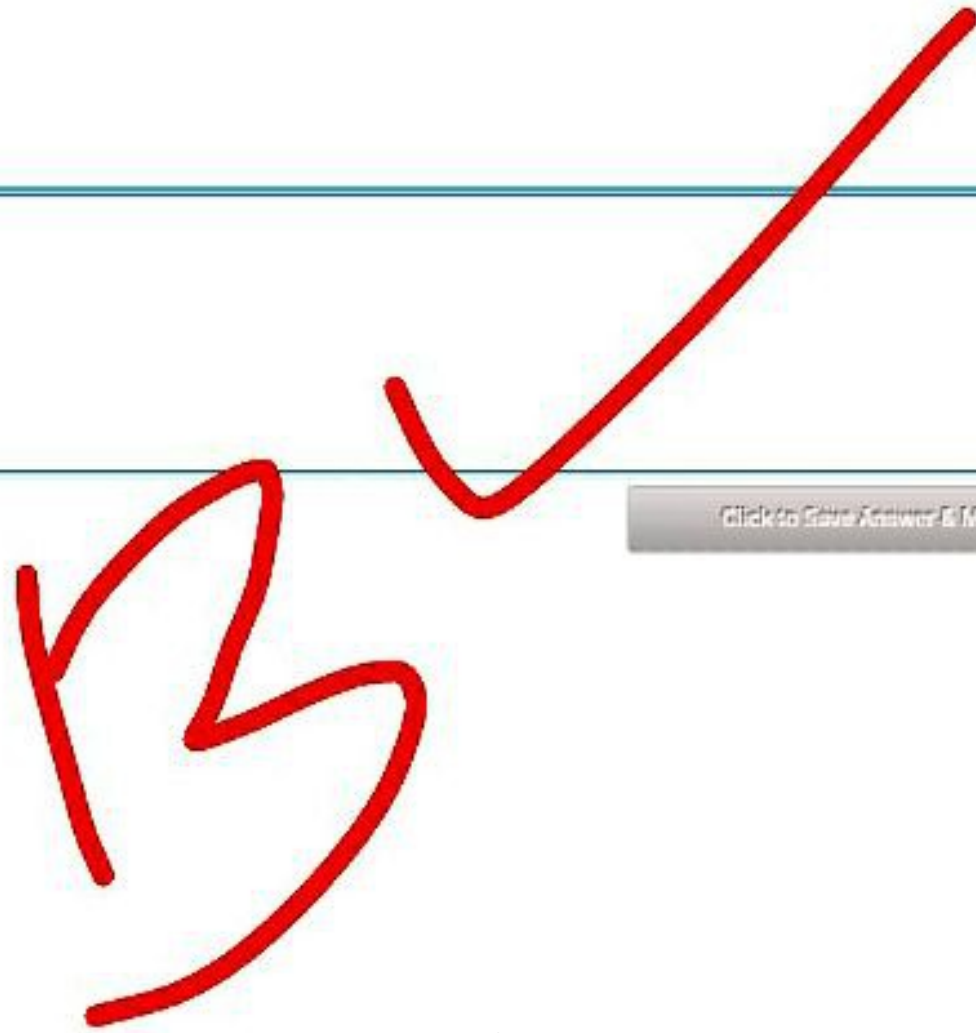
Total Marks: 1

Inverse of a matrix is given by

Select the correct option

[Reload Math Equations](#)

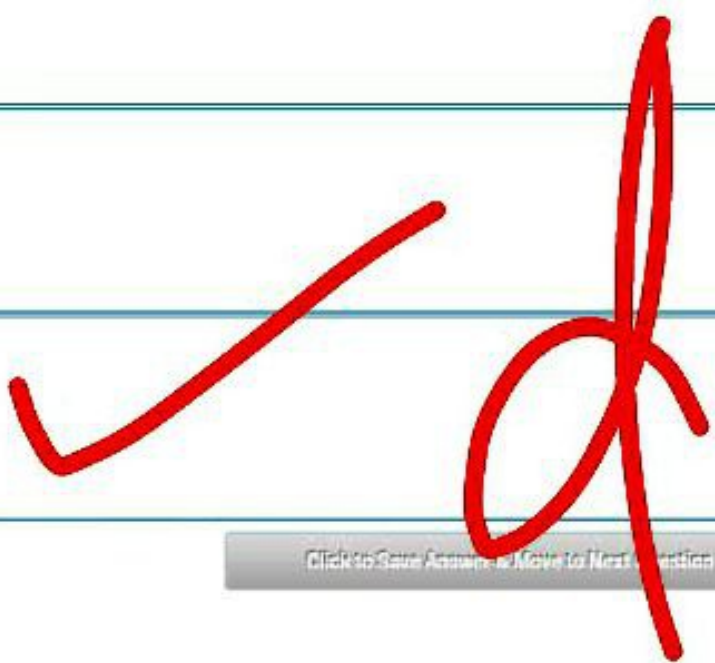
- |                       |   |
|-----------------------|---|
| <input type="radio"/> | $A^{-1} = \frac{1}{\det A} A^{-1}$        |
| <input type="radio"/> | $A^{-1} = \frac{1}{\det A} \text{adj}(A)$ |

[Click to Save Answer & Move to Next Question](#)

Let A be the matrix of order  $2 \times 3$  and B be the matrix of order  $3 \times 5$  , then which of the following is the order of the matrix AB ?

Select the correct option

- ☐  $2 \times 3$
- ☐  $3 \times 5$
- ☐  $3 \times 3$
- ☐  $2 \times 5$



[Click to Save Answer & Move to Next Question](#)

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Question # 18 of 30 ( Start time: 12:20:29 PM, 01 July 2020 )

Total Marks: 1

Which of the following is Row - Equivalent of  $\begin{pmatrix} 3 & 4 \\ 1 & 2 \end{pmatrix}$ ?

Select the correct option

[Reload Math Equations](#)

<input type="radio"/>	$\begin{pmatrix} 2 & -4 \\ -1 & 3 \end{pmatrix}$
<input type="radio"/>	$\begin{pmatrix} 3 & 1 \\ 4 & 2 \end{pmatrix}$
<input type="radio"/>	$\begin{pmatrix} 4 & 3 \\ 2 & 1 \end{pmatrix}$
<input checked="" type="radio"/>	$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$


[Click to Save Answer & Move to Next Question](#)

If the order of matrices A, B and C are

$$2 \times 3, 3 \times 15 \text{ and } 15 \times 100$$

respectively, then the order of Product ABC= \_\_\_\_.

Select the correct option

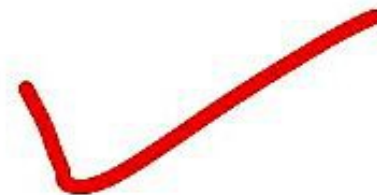
<input type="radio"/>	200
<input checked="" type="radio"/>	 $2 \times 100$
<input type="radio"/>	$100 \times 2$
<input type="radio"/>	405000

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

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

B

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



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

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

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Question # 13 of 30 ( Start time: 11:26:37 AM, 01 July 2020 )

Total Marks:

# Non square matrices do not have inverse

Select the correct option

☐

True

☐

False



Question # 7 of 30 ( Start time: 11:18:29 AM, 01 July 2020 )

Total Marks: 1

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

Select the correct option

[Reload Math Equations](#)☐

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

☐

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

☐

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

☐

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

[Click to Give Answer & Move to Next Question](#)

Question # 18 of 30 ( Start time: 11:34:22 AM, 01 July 2020 )

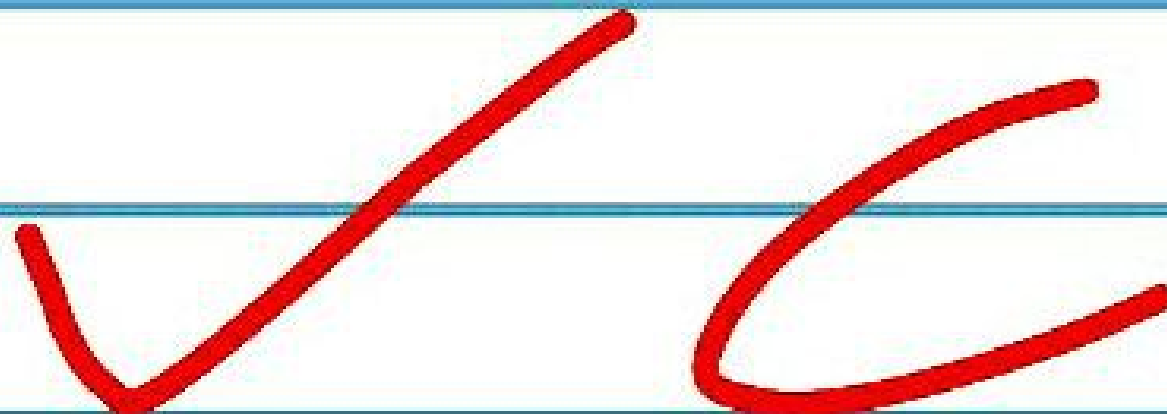
Total Marks: 1

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

Select the correct option

[Reveal Math Equations](#)

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

[Click to Show Answer & Move to Next Question](#)



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Question # 20 of 30 ( Start time: 11:36:52 AM, 01 July 2020 )

Total Marks: 1

A determinant does not change if we add a multiple of a row to another row.

Select the correct option

☐

TRUE

☐

FALSE

Question # 11 of 30 ( Start time: 12:12:33 PM, 01 July 2020 )

Total Marks:

What is the maximum possible number of pivots in a  $4 \times 6$  matrix ?

Select the correct option

☐ 4☐ 6☐ 8☐ 10



inverse of the matrix  $A = \begin{bmatrix} 1 & 2 \end{bmatrix}$  is NOT possible?

Correct option

because it is a square matrix.

because it is a zero matrix.

because it is an identity matrix.

because it is a rectangular matrix.



Click to Save Answer & Mark as Incorrect

**BEST OF LUCK ! ☺**