Question 1
Correct
Mark 1.00 out

Flag
 question

of 1.00

The sizes of two matrices A and B are given. Find the sizes of the product AB and the product BA, if the products are defined.

A is 2×1 , B is 1×1 .

1 ^ 1.

- \circ a. AB is undefined, BA is 1× 2.
- \circ b. AB is 1 × 2, BA is 1 × 1.
- c. AB is 2 × 1, BA is undefined. ✓
- \bigcirc d. AB is 2 × 2, BA is 1 × 1.

The correct answer is: AB is 2×1 , BA is undefined.

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Correct

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Solve the system of equations.

$$x_1 - x_2 + x_3 = 8$$

$$x_1 + x_2 + x_3 = 6$$

 $x_1 + x_2 - x_3 = -12$

The correct answer is: (-2, -1, 9)

Question ${f 3}$

Correct

Mark 1.00 out of 1.00

∇ Flag
 question

Determine whether the system is consistent.

$$x_1 + x_2 + x_3 = 6$$

 $x_1 - x_3 = -2$

oa. No

 $x_2 + 3x_3 = 11$

b. Yes

✓

The correct answer is: Yes

ℙ Flag question

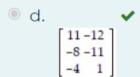
Perform the matrix operation.

Let
$$A = \begin{bmatrix} 2 & -4 \\ -2 & -5 \\ 3 & 5 \end{bmatrix}$$
 and $B = \begin{bmatrix} 9 & -8 \\ -6 & -6 \\ -7 & -4 \end{bmatrix}$. Find $A + B$.

o a.

b.

O C.



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The correct answer is:

Incorrect

Mark 0.00 out of 1.00

▼ Flag question Determine whether the matrix is in echelon form, reduced echelon form, or neither.

- a. Reduced echelon form *
- b. Neither
- oc. Fchelon form

The correct answer is: Echelon form

Question 6

Correct

question

Decide whether or not the matrices are inverses of each other.

- a. Yes

 ✓
- ob. No



Incorrect

Mark 0.00 out of 1.00

 The augmented matrix is given for a system of equations. If the system is consistent, find the general solution. Otherwise state that there is no solution.

$$\begin{bmatrix} 1 & 2 & -3 & 5 \\ 0 & 1 & 4 & -5 \\ 0 & 0 & 0 & 0 \end{bmatrix}$$

• a.
$$x_1 = 5 - 2x_2 + 3x_3 \times x_2 = -5 - 4x_3$$

$$\circ$$
 b. $x_1 = 15 + 11x_3$

$$x_2 = -5 - 4x_3$$

$$x_3 = 0$$

Oc.
$$x_1 = 5 - 2x_2 + 3x_3$$

$$\circ$$
 d. $x_1 = 15 + 11x_3$

$$x_2 = -5 - 4x_3$$

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The correct answer is: $x_1 = 15 + 11x_3$

$$x_2 = -5 - 4x_3$$

x₃ is free



ℙ Flag question Find the matrix product AB, if it is defined.

$$A = \begin{bmatrix} 0 & -3 \\ 4 & 3 \end{bmatrix}, B = \begin{bmatrix} -2 & 0 \\ -1 & 1 \end{bmatrix}.$$

a.

b.

О с.

STUDENTS-HUB. come correct answer is:



Correct

Mark 1.00 out of 1.00

 Find the inverse of the matrix, if it exists.

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

$$\begin{array}{c} \bigcirc \text{ G.} \\ \begin{bmatrix} 1 & -1 & 1 \\ 0 & 1 & -1 \\ 0 & 0 & 1 \\ \end{bmatrix}$$

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

o d.

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The correct answer is:

$$\begin{bmatrix} 1 & 0 & 0 \\ 1 & 1 & 0 \\ -2 & -1 & 1 \end{bmatrix}$$



Solve the problem.

Let
$$A = \begin{bmatrix} 1 & -3 & 2 \\ -2 & 5 & -1 \\ 3 & -4 & 5 \end{bmatrix}$$
 and $\mathbf{b} = \begin{bmatrix} b_1 \\ b_2 \\ b_3 \end{bmatrix}$.

Determine if the equation Ax = b is consistent for all possible b_1 , b_2 , b_3 . If the equation is not consistent for all possible b_1 , b_2 , b_3 , give a description of the set of all **b** for which the equation is consistent (i.e., a condition which must be satisfied by b_1 , b_2 , b_3).

- \circ a. Equation is consistent for all b₁, b₂, b₃ satisfying -3b₁ + b₃ = 0.
- b. Equation is consistent for all b_1 , b_2 , b_3 satisfying $7b_1 + 5b_2 + b_3 = 0$.
- \circ c. Equation is consistent for all possible b_1 , b_2 , b_3 .
- \circ d. Equation is consistent for all b₁, b₂, b₃ satisfying 2b₁ + b₂ = 0.

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Incorrect

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▼ Flag auestion Use the row reduction algorithm to transform the matrix into echelon form or reduced echelon form as indicated.

Find the reduced echelon form of the given matrix.

a.

O C.

o d.

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The correct answer is:



Correct

Mark 1.00 out of 1.00

▼ Flag question

Find the transpose of the matrix.

$$\begin{bmatrix} 7 & 4 & 7 & 4 \\ 0 & -7 & 0 & -7 \end{bmatrix}$$

$$\begin{bmatrix} 4 & 7 & 4 & 7 \\ -7 & 0 & -7 & 0 \end{bmatrix}$$

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The correct answer is:





