Matrix Multiplication, Inverses, and Determinants Exit Quiz

Part A Instructions: Choose the option that completes the sentence or answers the question.

- 1. If the dimensions of a matrix A are $r \times k$, and the dimensions of matrix B are $k \times s$, the dimensions of AB will be:
 - a. $r \times k$
 - b. $r \times s$
 - c. $k \times k$
 - d. None of these
- 2. If the determinant of a matrix is zero, then the matrix is:
 - a. Identity
 - b. Invertible
 - c. Non-Invertible
 - d. None of these
- 3. A matrix in which all the entries on the main diagonal equal 1 and all the other entries are zero, is known as:
 - a. Row matrix
 - b. Square matrix
 - c. Identity
 - d. None of these
- 4. The determinant of the matrix $A = \begin{bmatrix} 4 & -1 \\ 2 & 5 \end{bmatrix}$ is:
 - a. 18
 - b. 22
 - c. 12
 - d. None of these

Part B Instructions: Answer the question below.

5. Find the inverse of matrix $A = \begin{bmatrix} 11 & 5\\ 2 & 1 \end{bmatrix}$ if it exists.

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Answers

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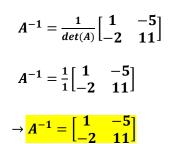
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Part B Instructions: Answer the question below.

5. Find the inverse of matrix $A = \begin{bmatrix} 11 & 5\\ 2 & 1 \end{bmatrix}$ if it exists.

$$det(A) = 11(1) - 2(5) = 11 - 10 = 1$$

Since $det(A) \neq 0$, A is invertible.



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