Name M.5/ No.

Matrix

1. Match the following :

Matrix	Dimension
1) $\begin{bmatrix} 10 \\ -12 \end{bmatrix}$	1×2
2) $\begin{bmatrix} 1 & 0 \\ -3 & 2 \\ 6 & -4 \end{bmatrix}$	2×2
3) $\begin{bmatrix} 1 & -2 \end{bmatrix}$	2×3
4) $\begin{bmatrix} 1 & 3 & 2 \\ 6 & -2 & 5 \end{bmatrix}$	2×1
5) $\begin{bmatrix} 2 & 0 \\ 3 & 1 \end{bmatrix}$	3×2

2. Determine type of the following matrix

Square Matrix | Diagonal Matrix | Zero Matrix | Identity Matrix
Row Matrix | Column Matrix | Upper triangle Matrix | Lower triangle Matrix

1) $\begin{bmatrix} 9 & 2 \\ 0 & 1 \end{bmatrix}$ _____

2) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ _____

3) $\begin{bmatrix} 1 & -2 & 9 \end{bmatrix}$ _____

4) $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$ _____

5) $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 3 \end{bmatrix}$ _____

6) $\begin{bmatrix} 1 & 0 & 0 \\ 6 & -2 & 0 \\ 4 & 5 & 4 \end{bmatrix}$ _____

7) $\begin{bmatrix} 9 \\ 8 \\ -3 \end{bmatrix}$ _____

8) $\begin{bmatrix} 1 & 2 & 3 \\ 6 & -2 & 0 \\ 5 & 0 & 4 \end{bmatrix}$ _____

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3. Given $A = \begin{bmatrix} 2 & 0 & 3 \\ -1 & 4 & 6 \end{bmatrix}$ find :

1) $a_{23} =$ _____ 2) $a_{12} =$ _____

3) $a_{21} =$ _____

4) $3 \cdot a_{22} - a_{11} =$ _____

5) $a_{13} + 2 \cdot a_{21} =$ _____

4. Construct matrix $A = [a_{ij}]_{3\times3}$ whose elements are given by

$a_{ij} = |i - 2j|$

$$A = \begin{bmatrix} __ & __ & __ \\ __ & __ & __ \\ __ & __ & __ \end{bmatrix}$$

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