

CLASS XII

Important previous year's board's questions

MATRICES

Q1. For a 2×2 matrix, $A = [a_{ij}]$, whose elements are given by $a_{ij} = \frac{i}{j}$, write the value of a_{12} . (cbse 2011).

Q2. If $\begin{bmatrix} x+y & 1 \\ 2y & 5 \end{bmatrix} = \begin{bmatrix} 7 & 1 \\ 4 & 5 \end{bmatrix}$, find x.

Q3. If $A = \begin{bmatrix} \cos\alpha & -\sin\alpha \\ \sin\alpha & \cos\alpha \end{bmatrix}$, then for what value of α is A an identity matrix. (cbse 2010)

Q4. If a matrix has 5 elements, write all the possible orders it can have. (cbse 2011)

Q5. Construct a 2×2 matrix $A = [a_{ij}]$, whose elements are given by $a_{ij} = i + 2j$. (cbse (f) 2008)

Q6. If $\begin{bmatrix} 15 & x+y \\ 2 & y \end{bmatrix} = \begin{bmatrix} 15 & 8 \\ x-y & 3 \end{bmatrix}$, find value of x and y. (cbse 2009 c)

Q7. Find the value of x, if $\begin{bmatrix} 3x+y & -y \\ 2y-x & 3 \end{bmatrix} = \begin{bmatrix} 1 & 2 \\ -5 & 3 \end{bmatrix}$.

Q8. Write the value of $x - y + z$ from the following equation. $\begin{bmatrix} x+y+z \\ x+z \\ y+z \end{bmatrix} = \begin{bmatrix} 9 \\ 5 \\ 7 \end{bmatrix}$. (cbse (f) 2011)

Q9. Write the order of the product matrix: $\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} [2 \ 3 \ 4]$.

Q10. If A is a matrix of order 3×4 and B is a matrix of order 4×3 , find the order of the matrix AB .

Q11. Find AB if: $A = \begin{bmatrix} 2 & 3 & 4 \\ -1 & 2 & -5 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 \\ 3 & -4 \\ -5 & 6 \end{bmatrix}$.

Q12. If $A = \begin{bmatrix} 1 & 0 \\ -1 & 7 \end{bmatrix}$, find the value k so that $A^2 - 8A = kI$.

Q13. If $A = \begin{bmatrix} 1 \\ -4 \\ 3 \end{bmatrix}$, $B = [-1 \ 2 \ 1]$ verify that: $(AB)' = B' A'$.

Q14. Evaluate: $2 \begin{vmatrix} 7 & -2 \\ -10 & 5 \end{vmatrix}$.