

① What are different types of matrix

② (a) Define determinant

(b) of $A = \begin{bmatrix} 8 & 4 \\ 3 & 7 \end{bmatrix}$, $B = \begin{bmatrix} 3 & 2 \\ 1 & 5 \end{bmatrix}$

~~③~~

find the matrix X such that

$$2A + 4B - 3X = 0$$

③ Find AB and BA

if $A = \begin{bmatrix} 4 & 6 & 2 \\ 1 & 7 & 4 \\ 3 & 9 & 2 \end{bmatrix}$

and $B = \begin{bmatrix} 8 \\ 7 \\ 1 \end{bmatrix}$

5) What do you mean by rank of a matrix? Discuss different types of matrix.

~~6) Define Convex Set. Define convex function. What are geometric~~

6) Discuss convex function and their geometric properties of convex function.

Ref. No.

Date

⑦ A consumer's utility function can be represented by $U = U(x, y)$ where x and y are the amounts of two goods x and y . If his money income (M) is fixed and prices of two goods ^{are} p_1 and p_2 then the purchases of two goods will be constrained by the maximum amount of M available to him. Maximize U

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