

#Jenny



Finally I get this ebook, thanks for all these I can get now!

#Rio



Cool! I'am really happy

#Markus Jensen



I did not think that this would work, my best friend showed me this website, and it does! I get my most wanted eBook

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My friends are so mad that they do not know how I have all the high quality ebook which they do not!

#Diego Butler



so many fake sites. this is the first one which worked! Many thanks

C. $1 - \alpha^2 - \beta^2 = 0$

D. $1 + \alpha^2 - \beta^2 = 0$

Answer: C

$A = \begin{bmatrix} \alpha & \beta \\ \alpha & -\alpha \end{bmatrix}$

$$\therefore A^T = A \cdot A = \begin{bmatrix} \alpha & \beta \\ \alpha & -\alpha \end{bmatrix} \begin{bmatrix} \alpha & \beta \\ \alpha & -\alpha \end{bmatrix} = \begin{bmatrix} \alpha^2 + \beta^2 & \alpha\beta - \alpha^2 \\ \alpha^2 - \alpha^2 & \beta^2 + \alpha^2 \end{bmatrix} = \begin{bmatrix} \alpha^2 + \beta^2 & \alpha\beta - \alpha^2 \\ 0 & \beta^2 + \alpha^2 \end{bmatrix}$$

Now, $A^T = I \Rightarrow \begin{bmatrix} \alpha^2 + \beta^2 & 0 \\ 0 & \beta^2 + \alpha^2 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

On comparing the corresponding elements, we have:

$\alpha^2 + \beta^2 = 1$

$\Rightarrow \alpha^2 + \beta^2 - 1 = 0$

$\Rightarrow 1 - \alpha^2 - \beta^2 = 0$

Question 3.4:

If the matrix A is both symmetric and skew symmetric, then

A. A is a diagonal matrix.

B. A is a zero matrix.

C. A is a square matrix.

D. None of these

Answer:

Answer: B

If A is both symmetric and skew-symmetric matrix, then we should have

$A^T = A$ and $A^T = -A$

$\Rightarrow A = -A$

$\Rightarrow 2A = O$

$\Rightarrow A = O$

Therefore, A is a zero matrix.

Question 3.5:

If A is square matrix such that $A^2 = A$, then $(I + A)^2 - 7A$ is equal to

A. A B. $I - A$ C. I D. $3A$

Answer:

Answer: C

$(I + A)^2 - 7A = I^2 + A^2 + 2IA + 3A^2 - 7A$

$= I + A^2 + 2A + 3A^2 - 7A$

$= I + A^2 + A + 3A + 3A - 7A$

$= I + A^2 + A - A$

$= I + A^2 - A$

$= I + A - A$

$= I$

$\therefore (I + A)^2 - 7A = I$

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