Lab1

Task 1

- Let A = $\begin{bmatrix} 0 \\ 3 \end{bmatrix}$

- B=$\begin{bmatrix} 4 & 0 & 1 \\ 0 & 2 & -1 \end{bmatrix}$

- D=[1 2]

Calculate
1. $(DB)^T$
2. AD
3. $BA + D^T$
4. $B^T D^T$

Task 2

- $A = \begin{bmatrix} 1 & 3 & 5 \\ 7 & 2 & 4 \\ 6 & 5 & 1 \end{bmatrix}$

- $B \begin{bmatrix} 4 & 3 \\ 2 & 3 \\ 1 & 1 \end{bmatrix}$

Find
1. AB
2. $A^T B$
3. AI

Task3

- There are 30 students in a class Among them ,8 students are learning both English and French .A total of 18 students are learning English .

- If every student is learning at least one language , how many students are learning French in total ?

Task4

- Among a group of students ,50 played cricket , 50 played hockey and 40 played volley ball.

- 5 played both cricket and hockey.

- 10 played both hockey and volleyball , 5 cricket and volleyball and 10 played all the 3 .

- If every student played at least one game ,find the number of students and how many played only cricket, only hockey and only volleyball?

- Among a group of people, 40% liked red, 30% liked blue and 30% liked green. 7% liked both red and green, 5% liked both red and blue, 10% liked both green and blue. If 86% of them liked at least one colour, what percentage of people liked all three?

- Suppose we draw 2 cards out of a deck of 52. What is the probability that both cards are spades?

- An urn contains 5 red and 10 black balls. We draw 2 balls from the urn without replacement. What is the probability that the second ball drawn is red?