$\begin{bmatrix}1&0\\2&1\end{bmatrix}\begin{bmatrix}1&2\\3&4\end{bmatrix}\begin{bmatrix}1&0\\2&1\end{bmatrix}\begin{bmatrix}1&2\\5&8\end{bmatrix}\begin{bmatrix}$

$A_{m\times n} x_{n\times 1} = 0_{m\times 1}$ $\begin{bmatrix}1&3&5\\2&4&6\end{bmatrix}_{m\times n}$

Write your roll number here:		
SN	**Statement**	**ANSWER**
1	If A=[1 0; 2 1][1 2; 3 4], then what will be the inverse of [1 0; 2 1]?	$\begin{bmatrix}1&0\\-2&1\end{bmatrix}$
2	Column space of a $m \times n$ matrix can not be greater than?.	n
3	The null space of a matrix A of size $m \times n$ is the set of all vectors in which subspace?	n R
4	$\{[1\ \ 2]^T, [2\ \ 3]^T\}$ is a basis in R^2.	True
5	Null space of a matrix A is perpedicular column space of which matrix? ($A, A^T, or A^{-1}$ or none of these).	A^T
6	Construct a 2×2 matrix, such that all its entries are +1 and -1 and its columns are orthogonal.	$\begin{bmatrix}+1&-1\\-1&-1\end{bmatrix}$
7	Project a point $[2\ \ 0]^T$ in x-y basis to new basis $B = \{[0\ \ 1]^T, [-1\ \ 0]^T\}$. What will be projected points.	$[-2\ \ 2]^T$
8	$A = [3\ \ 2\ \ 2; 2\ \ 3\ \ 2]$. Compute SVD for this rectangular matrix. What will be the largest singular value?	5.7
9	What will be the second largest singular value in Q8?	1
10	Suppose the India flag and the Bangladesh flag are each represented as image matrices. Which flag's image matrix will have the lower rank?	Bangladesh