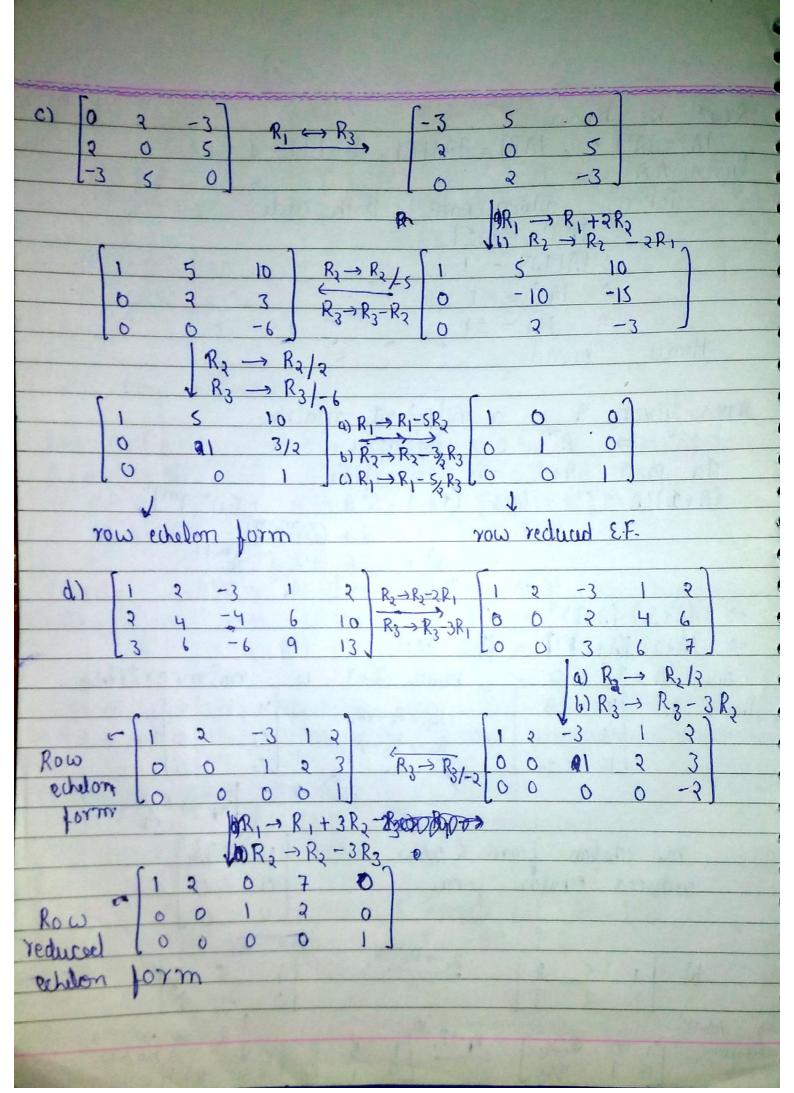
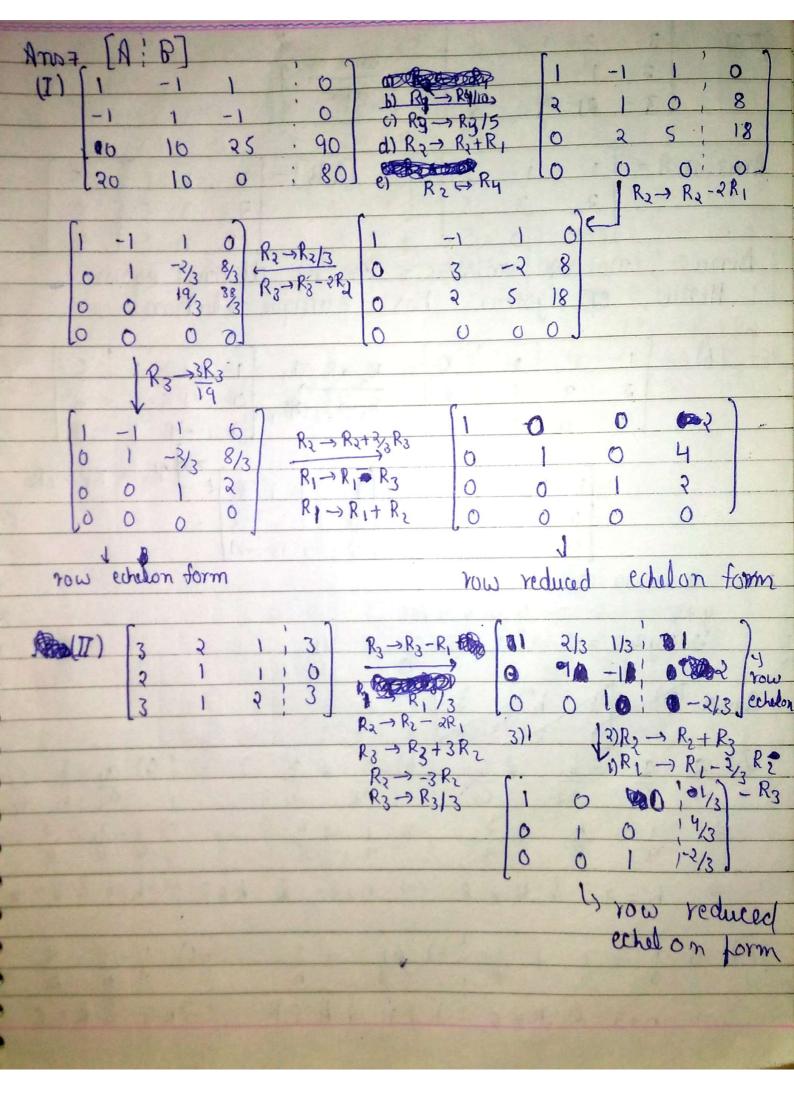
N-II
Assignment -1
Anos let dimention of Abr mxn & B be onxl (: AB is defined)
$A = \begin{bmatrix} a_{11} & a_{21} & \cdots & a_{n1} \end{bmatrix} B = \begin{bmatrix} b_{11} & b_{21} & \cdots & \cdots & b_{L1} \end{bmatrix}$
a12 a22 anz b12 b22 b12
am am ben ben
$\int_{\mathbb{R}^{n}} \mathbf{r} = \mathbf{r} \cdot \mathbf{r}$
$N = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{2m} \\ a_{21} & a_{22} & \cdots & a_{2m} \end{bmatrix}$
CALARICA.
(an anz anm) (bl) bl2bl
(AB) = [Zai, bij Zai, bzi Zai, bej
Zaizbzi Zaizbzi Zaizbzi
n i
[Zaimbii Zaimbzi - Zaimbzi]
$B^TA^T = $
The state of the s
Hence $(AB)^T = B^T A^T$

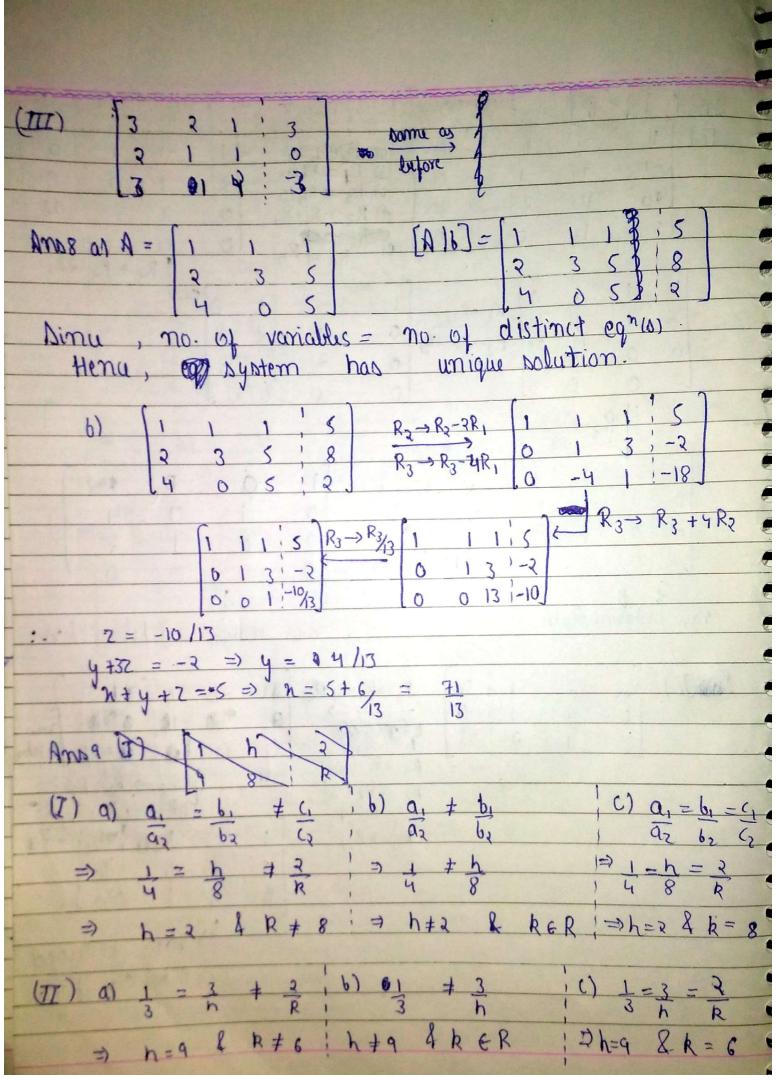
```
\begin{bmatrix} : & AA^{-1} = I \\ 2 & (AB)C = A(BC) \end{bmatrix}
                              [A = IA of
        Heny Proved.
Another a matrix A, let A^T be its transpose.

a (A + A^T)^T = A^T + (A^T)^T \left[ (A + B)^T = A^T + B^T \right]
= A^T + A \left[ (A^T)^T = A \right]
b) (A - A^T)^T = A^T - (A^T)^T
                  = A^{\mathsf{T}} - A = - (A - A^{\mathsf{T}})
 Charly, A+A^T is symmetric of A-A^T skew-symmitric Also, we can write A=\frac{1}{2}(A+A^T)+\frac{1}{2}(A-A^T)
   Hence, any matrix can be represented as
  the sum of symmetric & sky-symmetric matrin-
 [: A&B are sym-matrin]
.. (AB) = BTAT
  Uarly, AB is sym: iff: AB = BA.
```

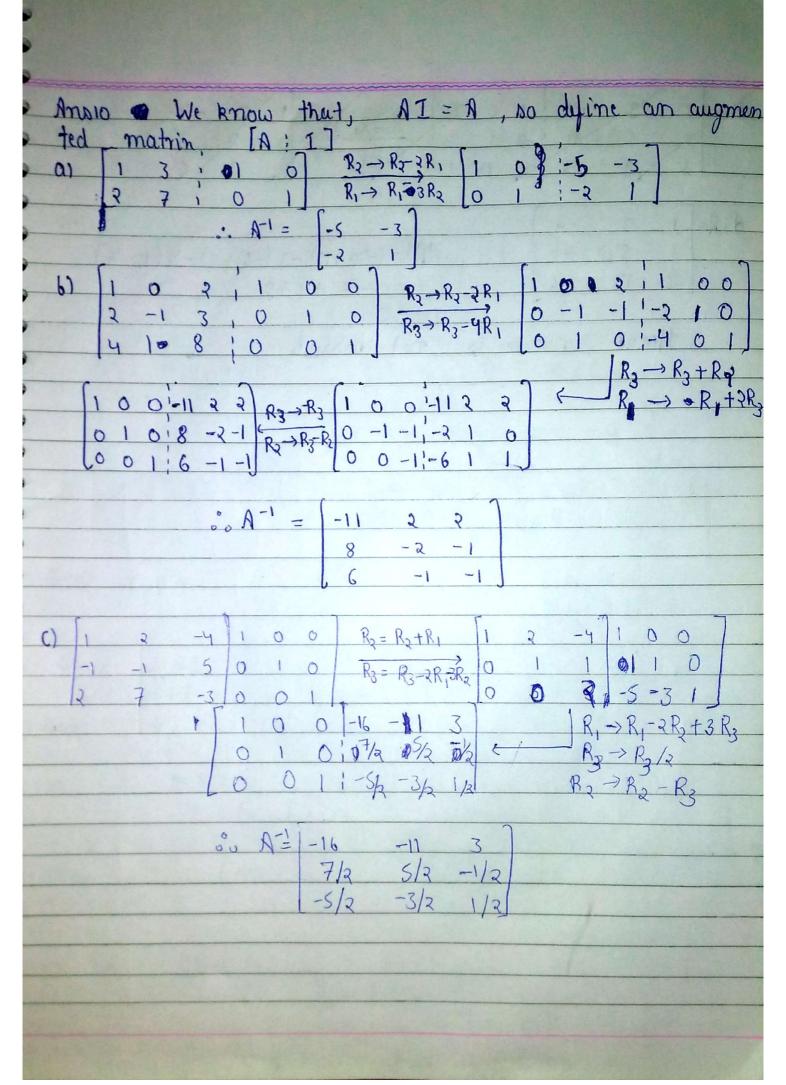
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$$\frac{d) A = \begin{bmatrix} 1 & 3 & -4 \\ 1 & 5 & -1 \end{bmatrix}}{13 & -6} = \begin{bmatrix} -30 + 13 \\ -17 + 19 + 8 \end{bmatrix} = 0$$
Hence, inverse is not possible.