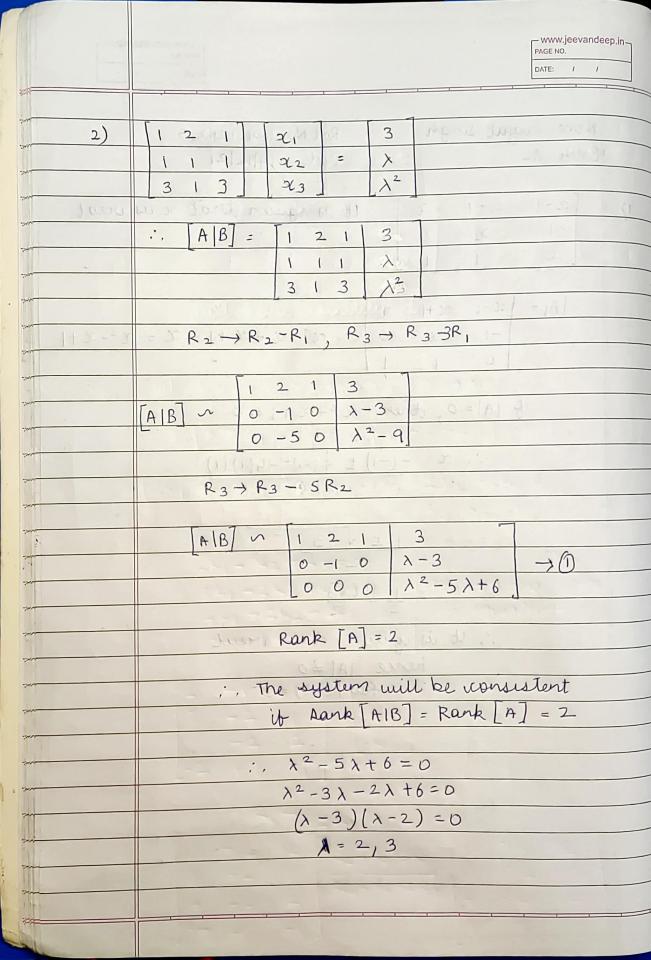
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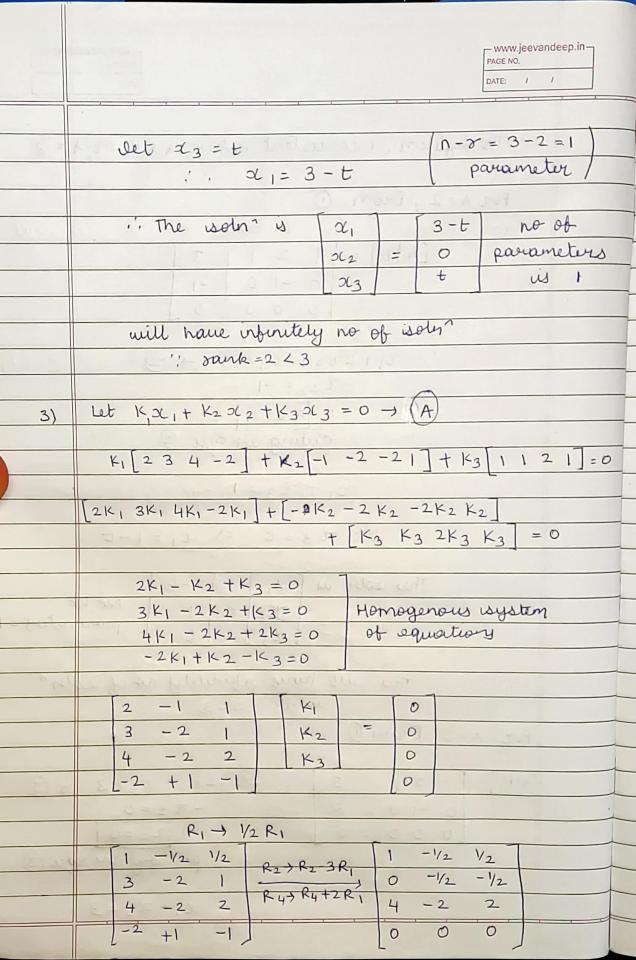
Name: Pargat singh Roll No: 16010121045 Batch: AZ Date: 14/12/21 x-1 x+1 xIt is ignier that is is vieal. 1 | A | = | >C-1 >C+1 >C $-1 \quad \alpha \quad 0 = \alpha^2 - \alpha + \alpha + 1 - \alpha = \alpha^2 - \alpha + 1$ If |A|=0, then $x^2-x+1=0$ $\therefore \alpha = -(-1) \pm \sqrt{(-1)^2 - 4(1)(1)}$ = 2(1)= 1 ± \ - 3 $=\frac{1}{2}+i\sqrt{3}$ ". It is igneen a is vieal hence IAI \$0 :. Rank (A) = 3



.. The system is consistent when x = 2 or 1 = 3 FOR 1 = 2; Errom () [A B] = 1 2 1 0 -1 0 | -1 0 0 0 $\therefore \alpha_1 + 2\alpha_2 + \alpha_3 = 3 \rightarrow \bigcirc$ · - 2/2 = -1 $A \leftarrow 2 \cdot \cdot \cdot \cdot \times 2 = 1$ puting in ogu 3 $x_1 + x_3 = 1$ let 23 = t =) x1=1-t The soln is | x, | - | 1-t NO OF 9C2 = 1 parametery = 1 This will have infunctely no of solor .. mark = 2 43 For X=3, Enom O

[AIB] = $\begin{bmatrix} 1 & 2 & 1 & 3 \\ 0 & -1 & 0 & 3 \end{bmatrix}$ $\begin{bmatrix} \alpha_1 + 2\alpha_2 + \alpha_3 = 3 \\ -\alpha_2 = 0 \end{bmatrix}$ $\begin{bmatrix} \alpha_1 + 2\alpha_2 + \alpha_3 = 3 \\ -\alpha_2 = 0 \end{bmatrix}$ putting in equ (3)

 $x_1 + x_3 = 3$



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:. There are infinitely many water non-itual

Hence the igner nectors are direarly dependent

$$-1 \quad k_2 - 1 \quad k_3 = 0 \quad \Rightarrow \boxed{2}$$

let [K3 = t]

putting ur equ (2)

$$-1 \quad K_2 = 1 \quad t =$$
 $K_2 = -t$

in equ 0; $K_1 + 1 + 1 + 1 + 0 = K_1 = -t$

substituting in A

$$-t x_1 + (-t) x_2 + t x_3 = 0$$

 $\therefore t x_3 = t x_1 + t x_2$

$$\mathcal{L}_{3} = \mathcal{L}_{1} + \mathcal{L}_{2}$$