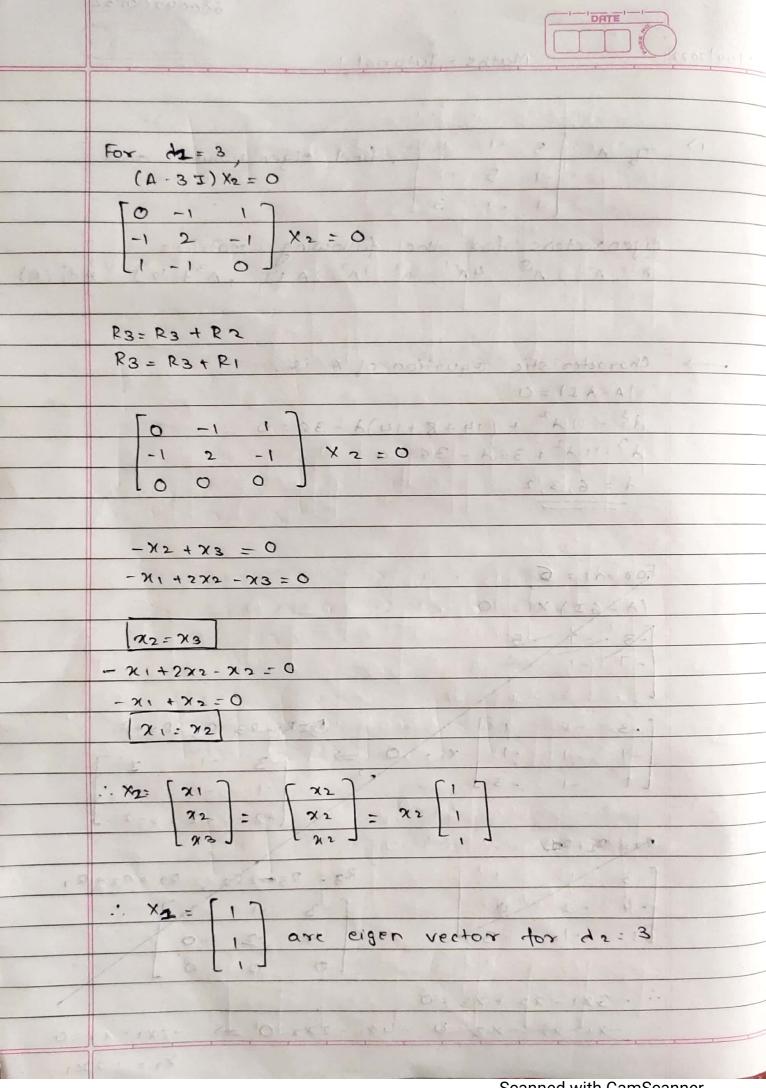
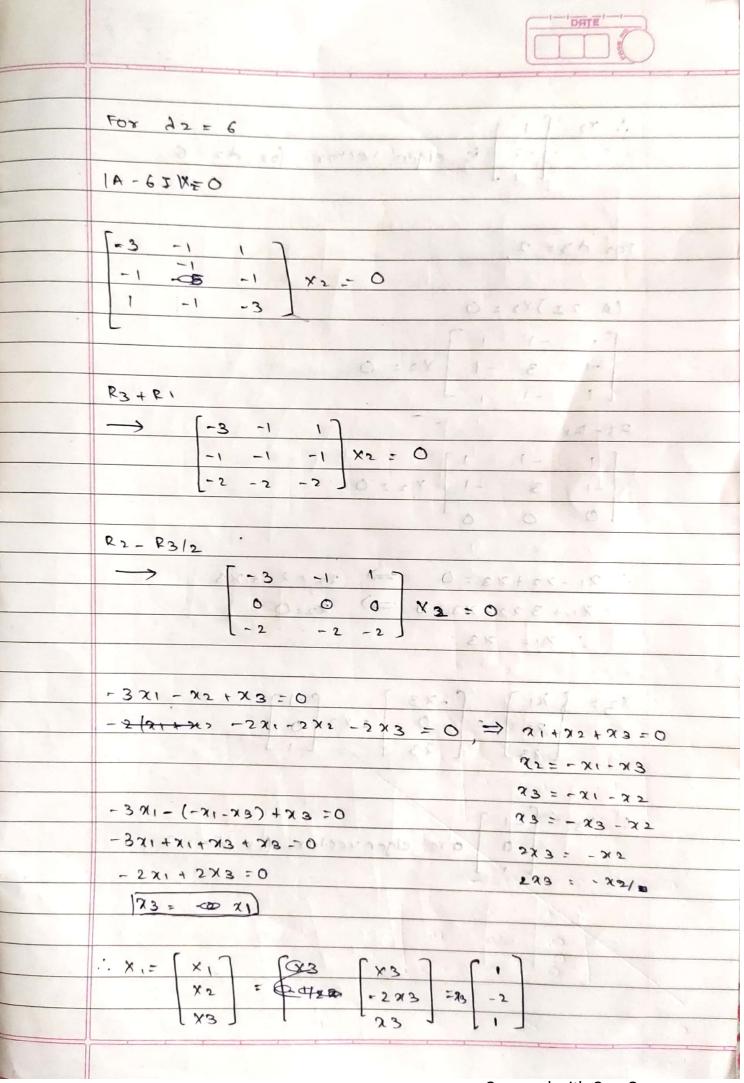
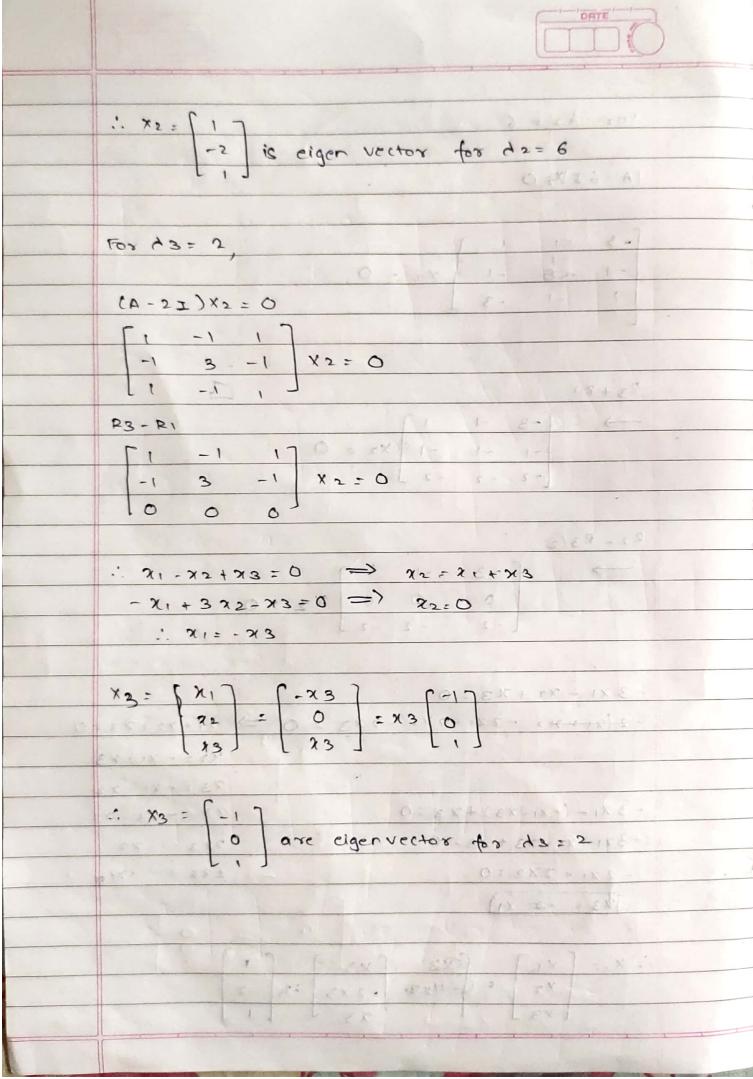


Scanned with CamScanner

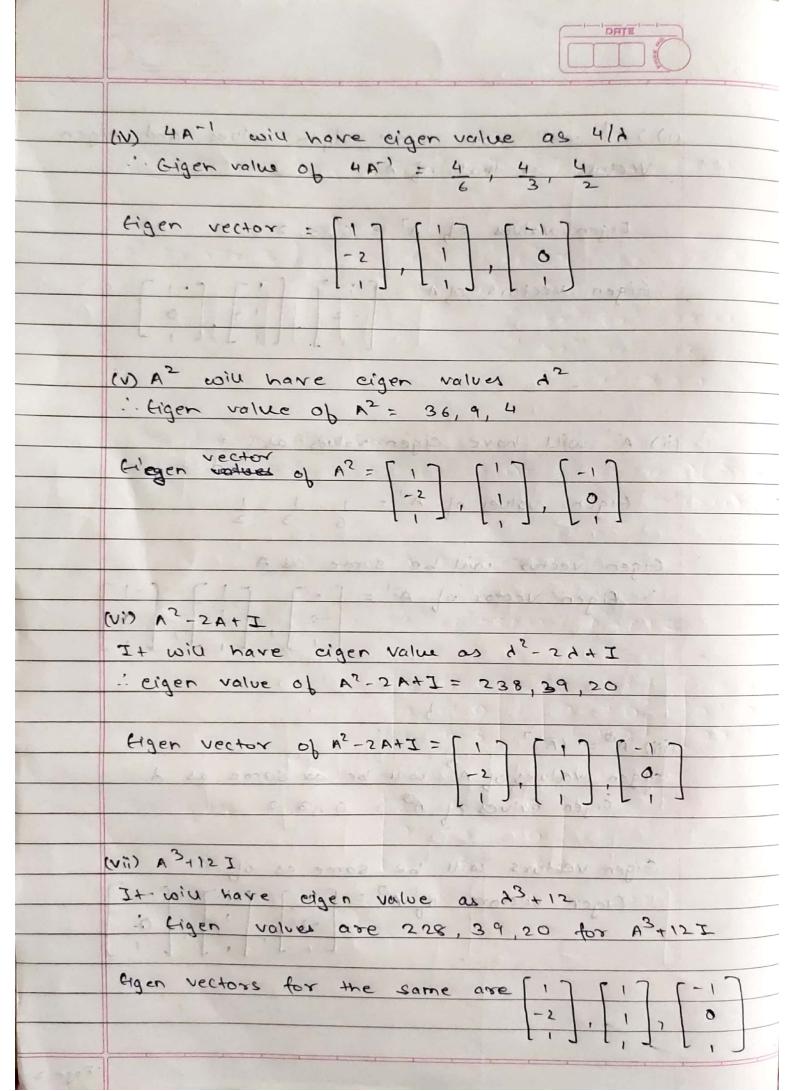


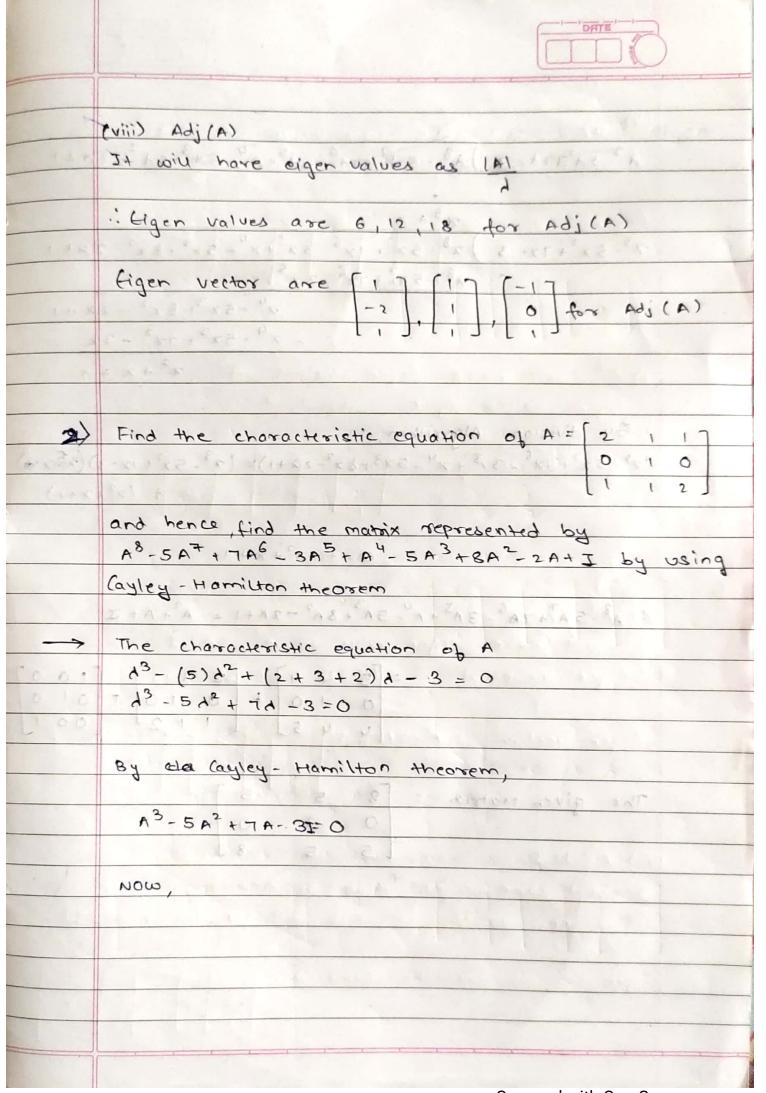






11) At will have some eigen values and eigen vectors as that of A Eigen values of AT = 6,3,2 Eigen vectors of AT: [1] [1] [-1] The movies maple over vior "A (v) HIP IS I'M do outer mapis (ii) A' will have eigen values as 1 Eigen vector will be some as A Eigen vector of $A^{-1} = \begin{bmatrix} 1 \\ -2 \end{bmatrix}$ This is a supply I this is no enter as I do Perose TEXAS TO John with month (iii) AO = (A) T (A) = THAS A (O YOURS) eigen values of A° will be as some as d : Eigen values of A0 : 6,3,2 Eigen vectors will be same as of A : Eigen vectors of A = [1] [-1] I I I see some set tot exclose man?







13-52+111-3) 18-52+116-32+1 -53-181 - 24-1

22 +2 + 1

: By division Algorithm, $(x^{8}-5x^{7}+7x^{6}-3x^{5}+x^{4}-5x^{3}+8x^{2}-2x+1)=(x^{3}-5x^{2}+7x-3)(x^{5}+x+1)$ + (x2+x+1)

AT TASTES OF 22+2+1, +AZ-6A

: A8-5A7+7A6-3A5+A4-5A3+8A2-2A+1 = A2+A+I

The given matrix = [8 5 5]

0 3 0

5 5 8



| 3> | In | the | following | matri | res or | re diagon | aliza | ble? | ZI SO |
|----|------|-----|-----------|-------|--------|-----------|-------|------|-------|
| | find | the | diagonal | and | modal | motrices | in | each | case |

$$d^{3} - (-1)d^{2} + [-12 - 3 - 6]d - 45 = 0$$

$$d^{3} + d^{2} - 21d - 45 = 0$$

For
$$d = -3$$

$$(A + 3A) \times i = 0$$

$$\begin{bmatrix} 1 & 2 & -3 \\ 2 & 4 & -6 \end{bmatrix} \times i = 0$$

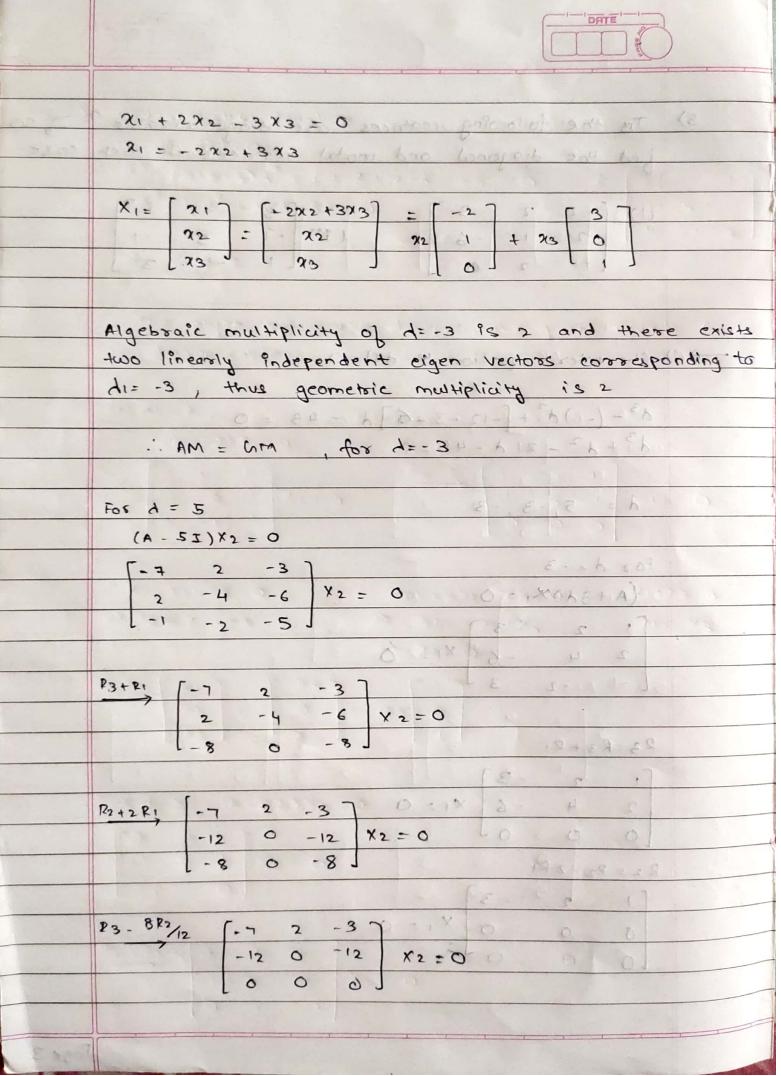
$$\begin{bmatrix} -1 & -2 & 3 \end{bmatrix}$$

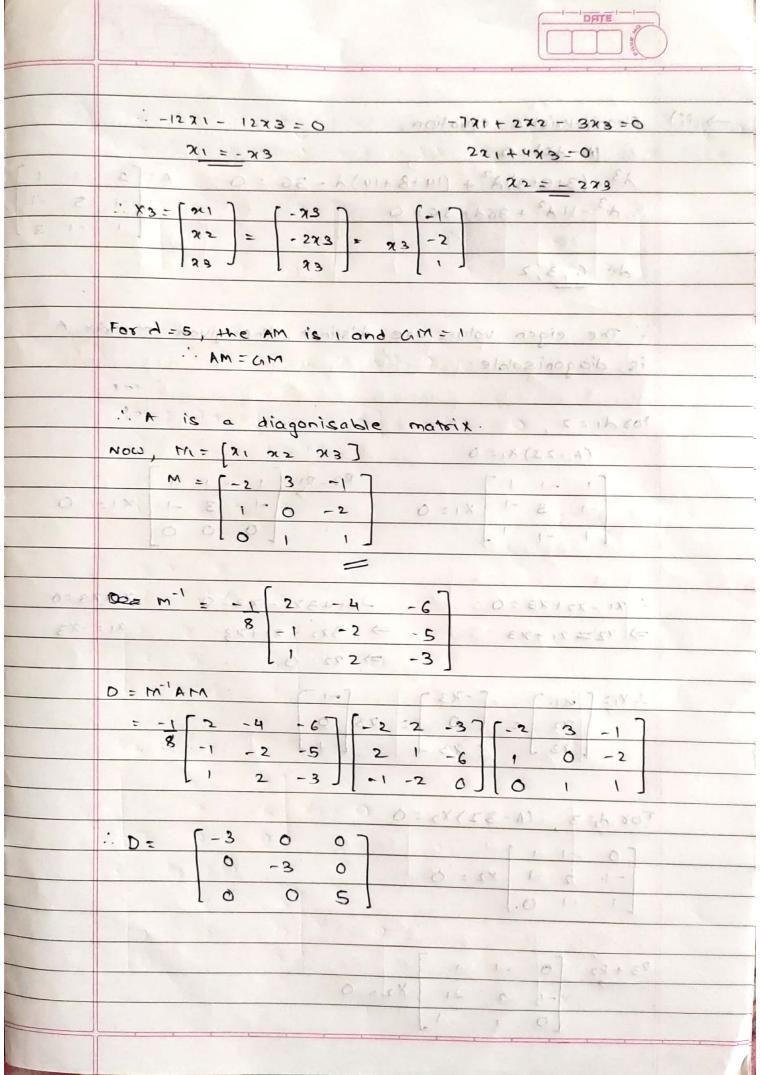
| [1 | 2 | -37 | |
|----|---|-----|---------|
| 0 | 0 | 0 | X (= 0 |
| lo | 0 | 0. | D = 5 K |
| 10 | 0 | 0 | O : CK |

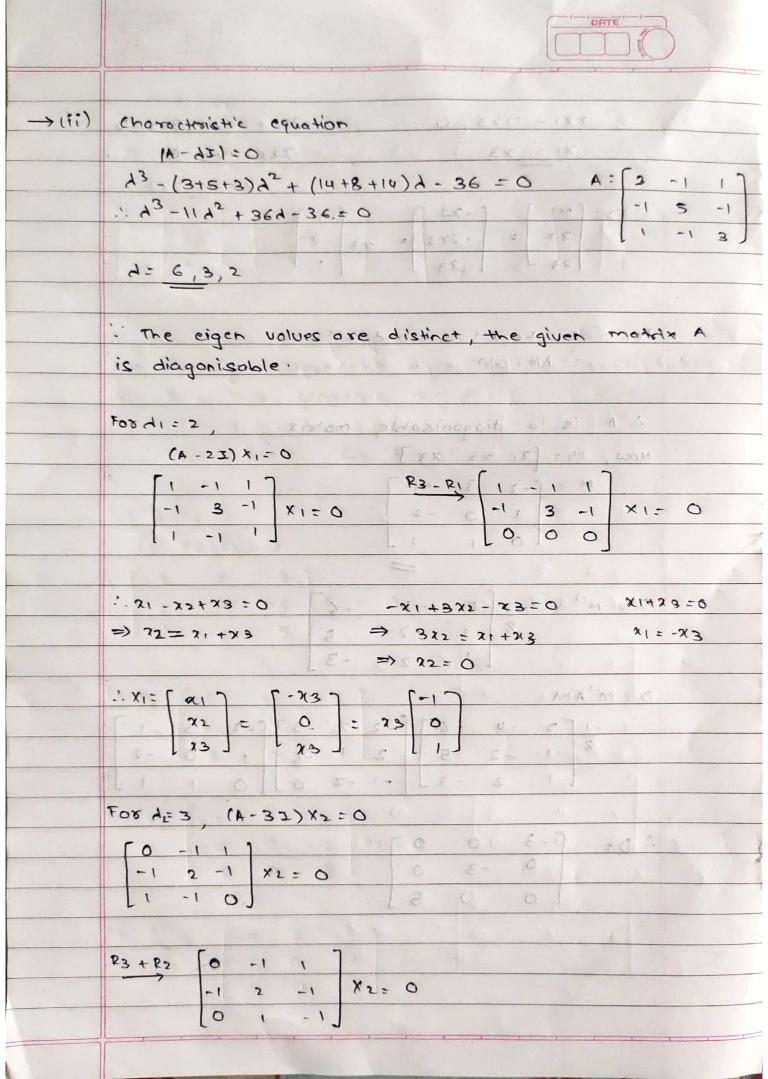
83. 88/A [.7 2 3 3

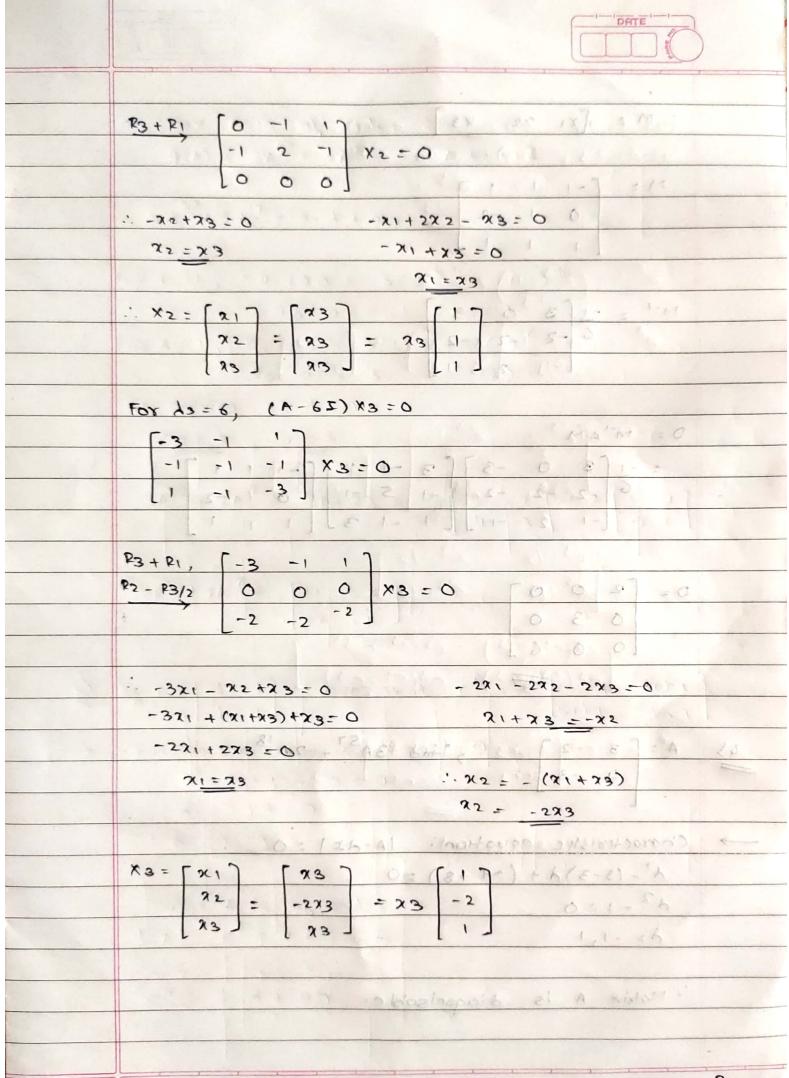
3 = 4 303

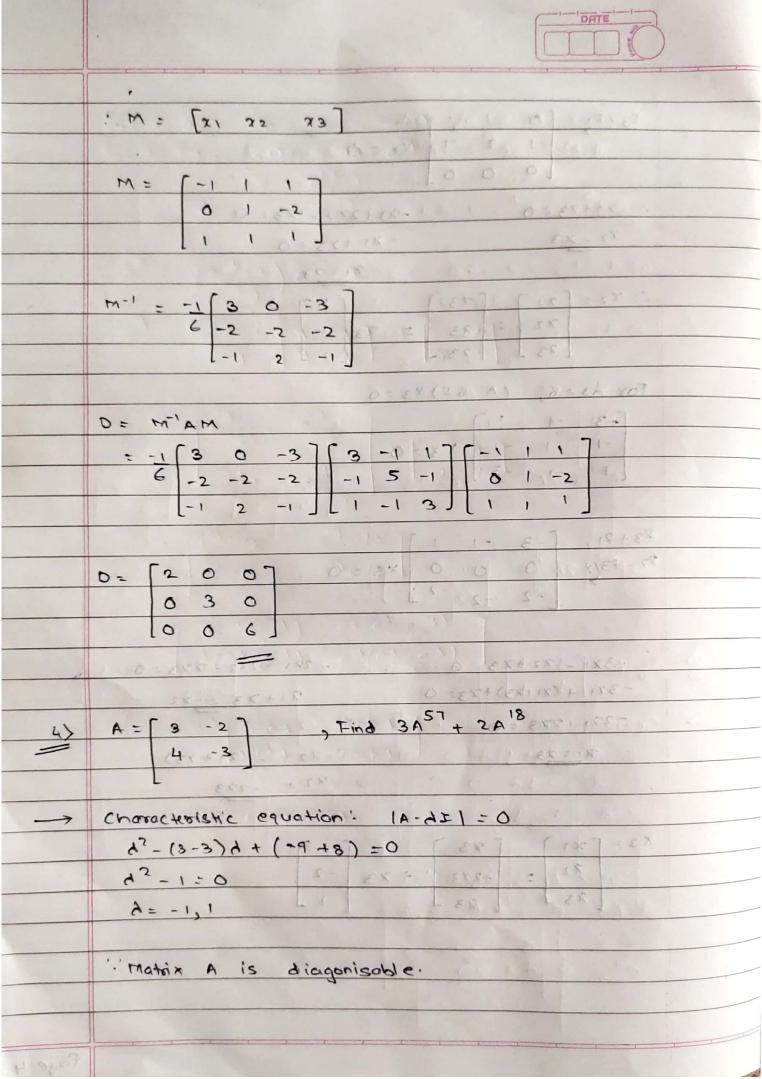
0 = (x(xx · v)













| | "Matrix A is of order 2 | | | | | | |
|---------------|--|--|--|--|--|--|--|
| | : (A(A) = 3A57 + 2A18 = QTA + QOI | | | | | | |
| | The state of the s | | | | | | |
| | $3d^{57} + 2d^{18} = a_1 d + a_0$ | | | | | | |
| | | | | | | | |
| | ford=-1, -0,+00 = 3(-1)57 +2(-1)18 | | | | | | |
| | $a_{0}-a_{1}=-1$ — (1) | | | | | | |
| | FOR A=1, a, +a0 = 3(1)57 + 2(1)18 90+ 91 = 5 - (2) | | | | | | |
| | | | | | | | |
| | on solving 6) d (2) | | | | | | |
| | ·· ao = 2 , a = 3 | | | | | | |
| | . 0.57 18 1 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | | | | | | |
| | $3A^{57} + 2A^{18} = 3A + 2I = 3[3 -2] + 2[1 0]$ | | | | | | |
| | [17 -3] [01] | | | | | | |
| | :. 3A 57 + 2A 8 = [1] | | | | | | |
| | $\frac{1.3A^{57} + 2A^{18}}{12 - 7} = \frac{11}{12} = \frac{11}{12}$ | | | | | | |
| | (E = 10) to 1 C 0 2 to 1 to 1 | | | | | | |
| 5) | To A = [4 4], Prove that eA = e (coshy sinhy) sinhy coshy | | | | | | |
| | [y y] sinhy coshy | | | | | | |
| \rightarrow | Characteristic equation: A-AII = 0 (120) | | | | | | |
| | · · · · · · · · · · · · · · · · · · · | | | | | | |
| | 4-574=0 | | | | | | |
| | d = 0,24 havery wastle | | | | | | |
| | | | | | | | |
| | Matrix A is of order 2 | | | | | | |
| | $Q(A) = e^A = q_1 A + q_0 I$ | | | | | | |
| | · ed = a, d + ao | | | | | | |
| | C = 410 + 40 | | | | | | |
| | | | | | | | |
| | | | | | | | |

