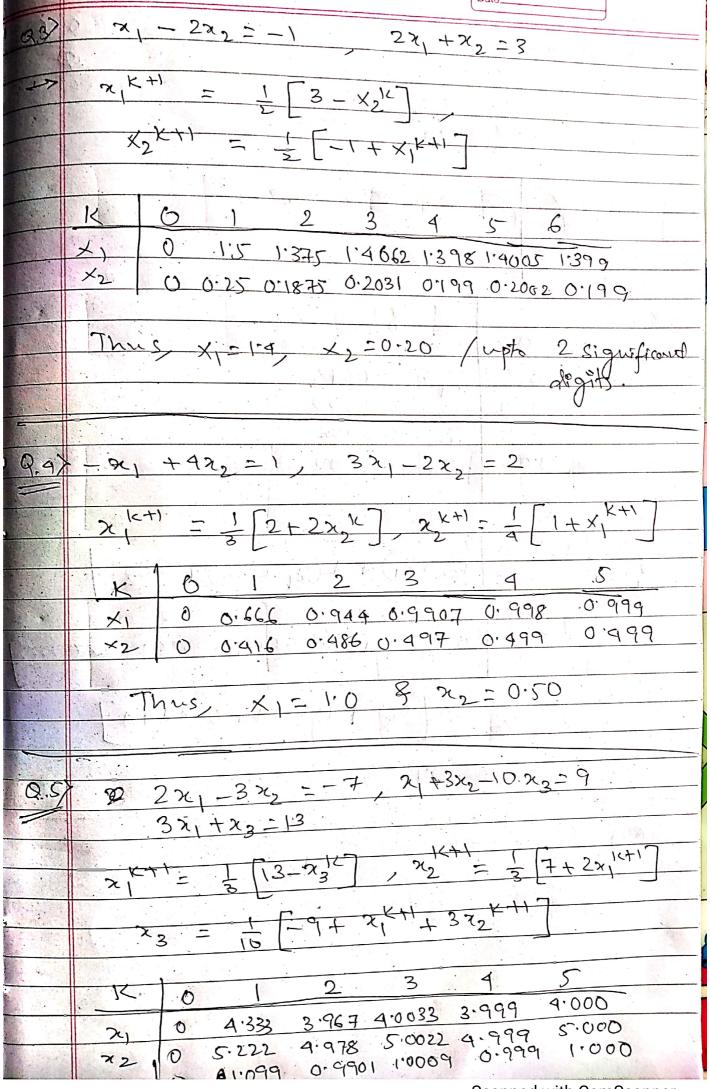
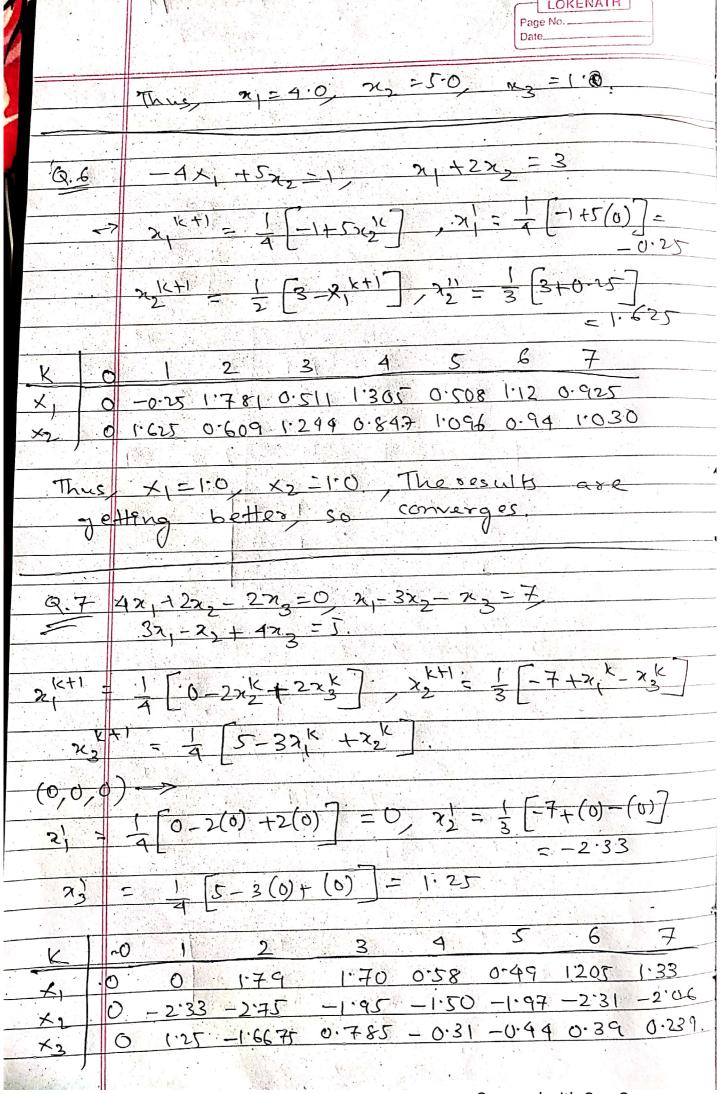
	Numerical Methode
	Numerical Methods Assignment -> 2 [LOKENATH] Page No. Date.
Name-	> Rohan Ghosha Id-> 181001001122
- B	atch - BCS 213
Total Control of the	
2.1.	2<1- 3-25 300 1=)
	$-2x_1 + x_2 = 3$
	A A A
->	$X_{1}^{(k+1)} = \frac{3}{3} - \frac{3}{2} \times \frac{1}{2} \times \frac{1}{2}$
	Xxx1 = 3 - 2 × x + 1
	· · · · · · · · · · · · · · · · · · ·
4	Now (0,0) produce xi = -1 + 2(0)1
	$x_1' = -1 + 2(0) = -1$
	$2 \times 2 = 3 - 2(0) = 3$
e.	
	Repeated instance iterations produce ->
	Losarions broduce ->
	K 0 1. 2 3 4 5 6
	×1 0 -1 5 -15 62 -2439 25
	1 2 0 31-7 33 -121 489 -1967
	The approximation is getting work
	herce method diverges
2.	$-x_1+4x_2=1$ $3x_1-2x_2=2$
Step 1	2,41 = -1+42
	$x_{2}^{(k+1)} = -1 + \frac{3}{2} x_{1}^{(k+1)}$
C.V.	mally 21 = -1+4(0)=-1
1	the second of th
	$3(\frac{1}{2}) = -1 + \frac{2}{3}(0) = -1$
	14 0 1 2 3 4 5 6
	Wall And
	The approxi mation is getting worse, hence diverges.
maken Mahay	hence diverges. U
and the second s	Scanned with CamScanner





	Date
1	Thus, 21=1.3 222.0, 213=0.30 converges.
4.8	matorix is storetly diagonally dominant,
•	[2 1] As an > a ₁₂ , a ₂₂ > a ₂₁
	Dreigonally dominant
	[-12] a > a 2 conditions is not large in hence it is not diagonally dominant.
	diagonally dominant
	$ \begin{bmatrix} 12 & 6 & 0 \\ 2 & -3 & 2 \end{bmatrix} \begin{bmatrix} a_{22} > a_{21} + a_{23} & 3 \\ 2 & -3 & 2 \end{bmatrix} $ $ \begin{bmatrix} 0 & 6 & 13 \end{bmatrix} \begin{bmatrix} not & taue, hence hot \end{bmatrix} $
	downant diragonally
	7-5-11 1911 > \a12 + \a13
	$ a_{22} > a_{21} + a_{22} $
	$ \alpha_{33} \rangle \alpha_{31} + \alpha_{32} $
	The matorx is dominant diagonally.