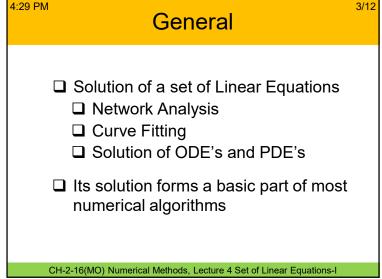
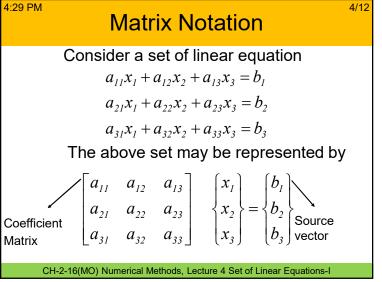


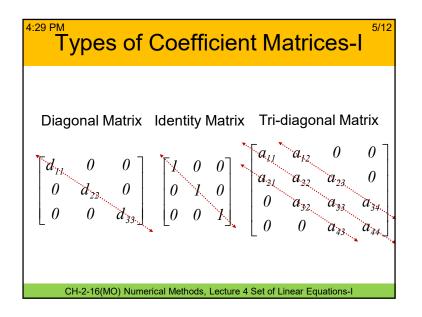
4:29 PM

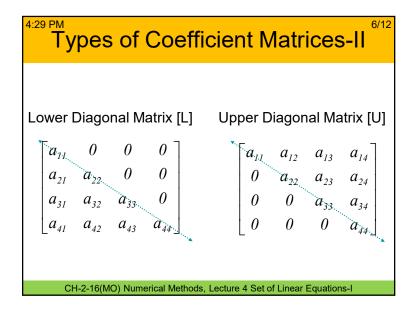
■ Understood that

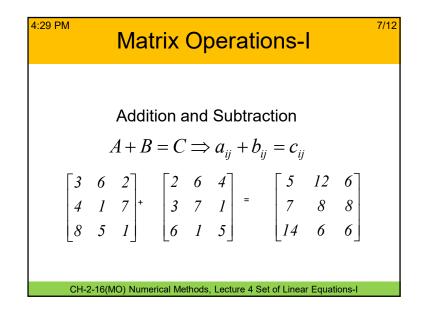


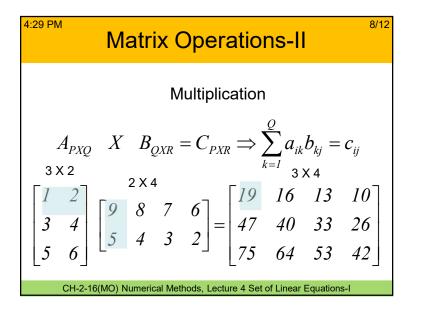


Review









Determinant

|
$$a_{II}^{\dagger} - a_{I2} - a_{I3} - a_{I3} - a_{I2} - a_{I3} - a_{I3}$$

CH-2-16(MO) Numerical Methods, Lecture 4 Set of Linear Equations-I

4:29 PM Towards Solution of Linear Equations-II

If
$$\begin{bmatrix}
l_{11} & 0 & 0 \\
l_{21} & l_{22} & 0 \\
l_{31} & l_{32} & l_{33}
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2 \\
x_3
\end{bmatrix} = \begin{cases}
b_1 \\
b_2 \\
b_3
\end{bmatrix}$$

$$x_1 = \frac{b_1}{l_{11}}$$

$$x_2 = \frac{b_1}{l_{11}}$$

$$x_2 = \frac{b_2 - l_{21}x_1}{l_{22}}$$

$$x_3 = \frac{b_3 - l_{31}x_1 - l_{32}x_2}{l_{33}}$$

$$x_4 = \frac{b_1}{l_{11}}$$
For $i = 2, N$

$$b_i - \sum_{j=1}^{i-1} l_{ij}x_j$$

$$x_i = \frac{b_i}{l_{ii}}$$

$$x_3 = \frac{b_3 - l_{3I}x_I - l_{32}x_2}{l_{33}}$$
CH-2-16(MO) Numerical Methods, Lecture 4 Set of Linear Equations-1

4:29 PM Towards Solution of Linear Equations-III

If
$$\begin{bmatrix} u_{II} & u_{I2} & u_{I3} \\ 0 & u_{22} & u_{23} \\ 0 & 0 & u_{33} \end{bmatrix} \begin{bmatrix} x_I \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} b_I \\ b_2 \\ b_3 \end{bmatrix}$$

$$x_N = \frac{b_N}{u_{NN}}$$

$$\Rightarrow x_3 = \frac{b_3}{u_{33}}$$

$$x_2 = \frac{b_2 - u_{23}x_3}{u_{22}}$$

$$x_1 = \frac{b_1 - u_{12}x_2 - u_{13}x_3}{u_{II}}$$
CH-2-16(MO) Numerical Methods, Lecture 4 Set of Linear Equations-I