1. hafta Çarşamba Dersi

24 Şubat 2021 Çarşamba 08:30

$$3x_{1} + 6 - 2 = 12$$

$$3x_{1} + 6 - 2 = 12$$

$$3x_{1} + 2x_{2} - x_{3} = -2$$

$$2x_{2} = 3$$

$$2x_{3} = 4$$

$$3x_{1} + 2x_{2} - x_{3} = -2$$

$$3x_{2} + 2x_{3} + 2x_{3} = -2$$

$$3x_{3} + 2x_{3} + 2x_{3} = -2$$

$$3x_{4} + 2x_{2} - x_{3} = -2$$

$$3x_{5} + 2x_{5} + 2$$

(b)
$$3x_1 + 2x_2 - x_3 = -2$$

$$\begin{cases}
-3x_1 - x_2 + x_3 = 5 \\
3x_1 + 3x_2 + x_3 = 3
\end{cases}$$

$$3x_{1} + 2x_{2} - x_{3} = -2$$

$$-3x_{1} - x_{2} + x_{3} = 5$$

Tam üggensel form.

$$x_3 = 2$$

$$x_2 = 3$$

$$x_1 = -2$$

$$-3x_1 - 3 + x_3 = 5$$

$$+ 3x_1 + 6 + x_3 = 2$$

$$+\frac{3x_1+6+x_3=2}{0}$$

$$0 \quad 3+2x_3=7 \Rightarrow 2x_3=4 \Rightarrow \boxed{x_3=2}$$

$$0 \quad 3+2x_3=7 \Rightarrow 2x_3=4 \Rightarrow \boxed{x_3=2}$$

Denk Sistemler: Dezighenler ayrı & Gözüm de ayrı

Homojer Linear Derklen Sistemi:

$$a_{11}x_1 + a_{12}x_2 + \cdots + a_{1n}x_n = b_1 = 0$$

 $a_{21}x_1 + a_{22}x_2 + \cdots + a_{2n}x_n = b_2 = 0$
 \vdots
 $a_{m1}x_1 + a_{m2}x_2 + \cdots + a_{mn}x_n = b_m = 0$

$$\begin{pmatrix} x_1, x_2, \dots, x_n \end{pmatrix} = \begin{pmatrix} 0, 0, \dots, 0 \end{pmatrix}$$

$$\frac{\text{her zonon}}{\text{loir } \hat{q} \hat{o} \hat{z} \hat{m}}$$

Denklem Sistemi

Sayin

$$a_{11}x_1 + a_{12}x_2 + \dots + a_{1n}x_n = b_1$$

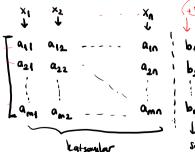
$$a_{21}x_1 + a_{22}x_2 + \dots + a_{2n}x_n = b_2$$

:

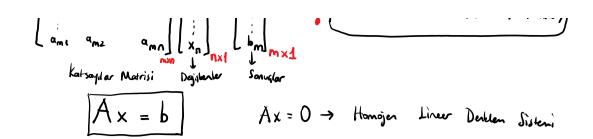
$$a_{m1}x_1 + a_{m2}x_2 + \dots + a_{mn}x_n = b_m$$

$$\begin{bmatrix} a_{11} & a_{10} & \cdots & a_{1n} \\ a_{21} & a_{22} & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ a_{m1} & a_{m2} & a_{mn} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ \vdots \\ x_n \end{bmatrix} = \begin{bmatrix} b_1 \\ b_2 \\ \vdots \\ b_m \end{bmatrix}_{m \times 1}$$

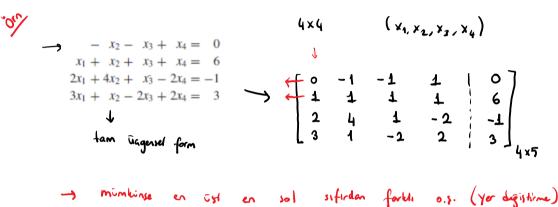
$$\rightarrow$$



katsoylar Augmented Matrix (Ek matris)



$$A = \begin{pmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & & & & \\ a_{m1} & a_{m2} & \cdots & a_{mn} \end{pmatrix} \xrightarrow{\text{man}} \text{sign}$$



$$-2r_{4}+r_{3}\rightarrow r_{3}$$

$$-3r_{4}+r_{4}\rightarrow r_{4}$$

$$(2)$$

$$-3r_{1}+r_{4}\rightarrow r_{4}$$

$$(3)$$

$$1$$

$$-3r_{1}+r_{4}\rightarrow r_{4}$$

$$(4)$$

$$-3r_{5}+r_{4}\rightarrow r_{4}$$

$$(5)$$

$$-3r_{1}+r_{4}\rightarrow r_{4}$$

$$(7)$$

$$-3r_{1}+r_{4}\rightarrow r_{4}$$

$$(7)$$

$$-3r_{5}\rightarrow 0$$

$$(7)$$

$$-3r_{1}+r_{4}\rightarrow r_{4}$$

$$(7)$$

$$-3r_{5}\rightarrow 0$$

$$-3$$