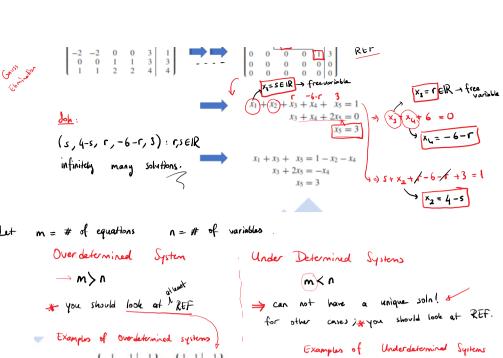


IX. = rER - free



$$\text{System (c): } \begin{bmatrix} 1 & 2 & 1 & 1 \\ 2 & -1 & 1 & 2 \\ 4 & 3 & 3 & 4 \\ 3 & 1 & 2 & 3 \end{bmatrix} \rightarrow \begin{bmatrix} 1 & 2 & 1 & 1 \\ 0 & 1 & \frac{1}{3} & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix} \rightarrow \text{inf. now solvy.}$$

System (a):
$$\begin{bmatrix} 1 & 2 & 1 & 1 \\ 2 & 4 & 2 & 3 \end{bmatrix} \rightarrow \begin{bmatrix} 1 & 2 & 1 & 1 \\ \hline{0 & 0 & 0 & 1} \end{bmatrix} \xrightarrow{b = 1} bo solo.$$

1 Matrices

Matrix Operations

Y You can not multiply any two matrix.

$$\frac{A_{m \times m} \cdot B_{m \times m}}{B_{m \times m} \cdot A_{m \times m}} = C_{m \times m}$$

$$\frac{1st row of A \cdot \frac{4st}{(1,3,4)} \cdot (1,2,3) = 1.1 + 3.2 + 4.3 = 19}{(1,3,4) \cdot (1,2,3) = 1.1 + 3.2 + 4.3 = 19}$$

$$\frac{2nl}{(1,3,4)} \xrightarrow{\text{column of B}} \xrightarrow{} C_{12}$$

$$(1,3,4) \cdot (2,0,-1) = 1.2 + 3.0 + 4.4 - 2$$