MA 527

Lecture Notes (section 7.3)

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7.3 Gaussian Elimination

$$(Ex)/x-y=-3-0 \quad (Mat|ab)$$

$$(2x+y=0-2) \quad A, b$$

$$> x=Ab$$

$$matrix form$$

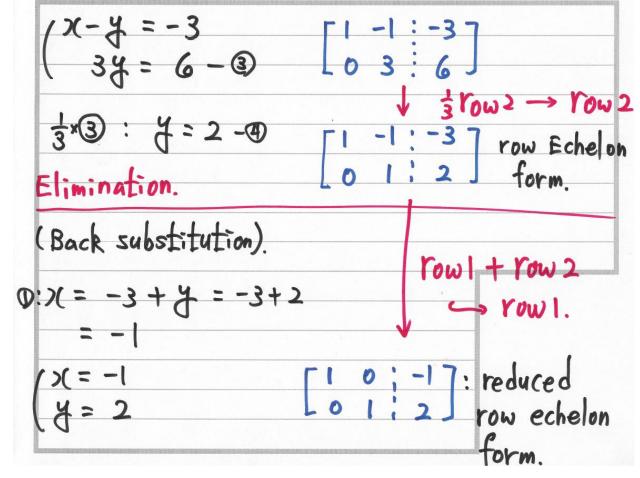
$$\begin{bmatrix} 1 & -1 \\ 2 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -3 \\ 0 \end{bmatrix} : \begin{bmatrix} 1 & -1 \\ 2 & 1 \end{bmatrix}$$
the augmented matrix.

$$(2)-2\times0:$$

$$2x+y=0$$

$$3x+y=0$$

$$3x+$$



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(3)(+6y=6): No solution.
 \begin{bmatrix} 1 & 2 & 1 & 7 & r_2 - 3r_1 & \begin{bmatrix} 1 & 2 & 1 & 1 \\ 0 & 0 & 1 & 3 \end{bmatrix}
                                  Q2: (x+2y=1): infinitely many (3)(+6y=3) solutions
                            row2:
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