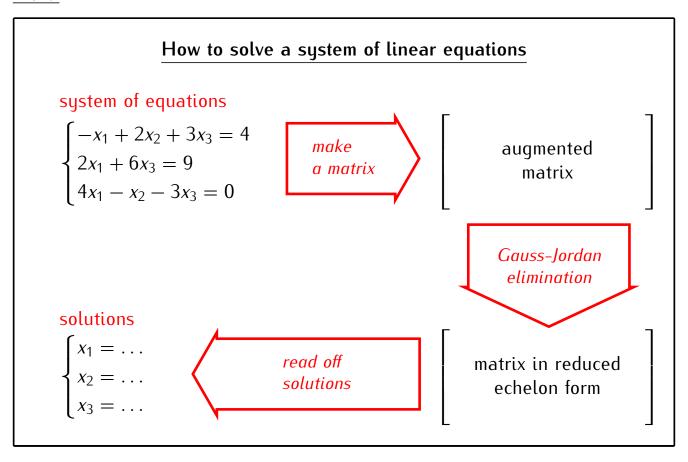
Next:



<u>Matrices</u>

matrix = rectangular array of numbers

Note

Every system of linear equations can be represented by a matrix.

Example.

$$\begin{cases}
-x_1 + 2x_2 + 3x_3 = 4 \\
2x_1 + 6x_3 = 9 \\
4x_1 - x_2 - 3x_3 = 0
\end{cases}$$

Elementary row operations:

1) Interchange of two rows.

2) Multiplication of a row by a non-zero number.

3) Addition of a multiple of one row to another row.

Proposition

Elementary row operations do not change solutions of the system of equations represented by a matrix.

