

Definition.

A rectangular arrangement of numbers (which may be real or complex numbers) in rows and columns, is called a matrix. This arrangement is enclosed by small () or big [] brackets. The numbers are called the elements of the matrix or entries in the matrix. A matrix is represented by capital letters A, B, C etc. and its elements by small letters a, b, c, x, y etc. The following are some examples of matrices:

$$A = \begin{bmatrix} 1 & 4 \\ 2 & 3 \end{bmatrix}, B = \begin{bmatrix} 2+i & -3 & 2 \\ 1 & -3+i & -5 \end{bmatrix}, C = [1, 4, 9], D = \begin{bmatrix} a \\ g \\ h \end{bmatrix}, E = [l]$$