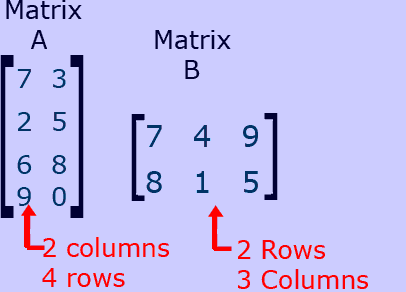
**MATRICES**

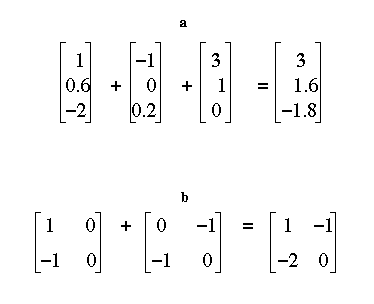
* Matrices are shown in the following way: 

The digits shown horizontally are called ROWS

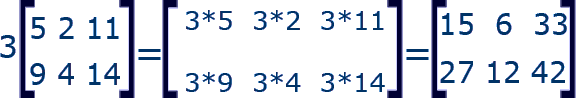
The digits shown vertically are in COLUMNS

The ORDER of the matrix is given by [ROWS x COLUMNS]

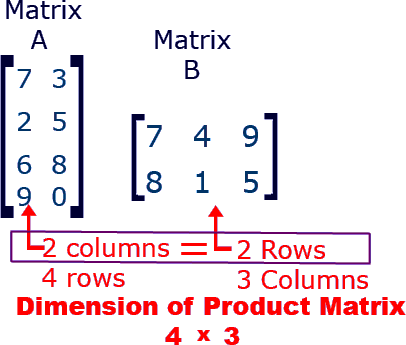
* For addition and subtraction of matrices, the order of the matrices has to be same and the corresponding values are added or subtracted under the given circumstances.



* There are 2 types of multiplication. Firstly, scalar, which is demonstrated in the following:

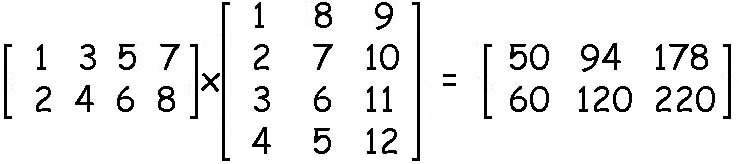


The number outside the matrix is multiplied to all the numbers inside.

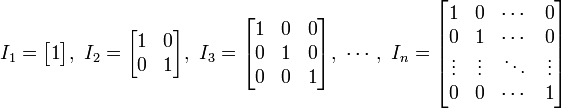
The second type is matrix multiplication, the following: 

It is necessary for the number of columns of first matrix to be equal to number of rows of second. Otherwise multiplication cant be done.

The product of 2 matrices

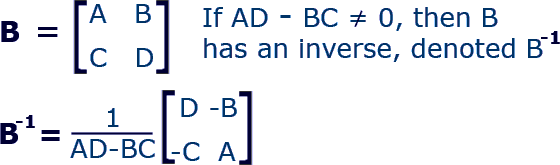
The product is found by multiplying the first row of matrix A with first column of matrix B with corresponding values to give answer 50. [(1\*1)+(3\*2)+(5\*3)+(7\*4)]=50. Likewise the first column is multiplied with second row and then third row. Then the second column is multiplied with first, second, and third rows respectively.

* These are identity matrices:



Multiplication of matrices with identity matrix gives the same matrix as an answer.

* A zero matrix is one with all numbers 0 and addition or subtraction gives the same matrix as answer.
* Finally the inverse:



AD-BC is known as determinant and it is multiplied with the matrix with digits of main diagonal displaced nd signs of the other changed.