ADDITION

Add ( ):

Description: Here **A** is a two – dimensional array with **M** rows and **N** columns and **B** is a two – dimensional array with **X** rows and **Y** columns. This algorithm adds these two arrays.

```
1.   If (M ≠ X) or (N ≠ Y) Then
2.        Print: Addition is not possible.
3.        Exit
     [End of If]
4.   Repeat For I = 1 to M
5.        Repeat For J = 1 to N
6.             Set C[I][J] = A[I][J] + B[I][J]
          [End of Step 5 For Loop]
     [End of Step 6 For Loop]
7.   Exit
```

Explanation: First, we have to check whether the rows of array `A` are equal to the rows of array `B` or the columns of array `A` are equal to the columns of array `B`. if they are not equal, then addition is not possible and the algorithm exits. But if they are equal, then first for loop iterates to the total number of rows i.e. `M` and the second for loop iterates to the total number of columns i.e . `N`. In step 6, the element A`[I][J]` is added to the element `B[I][J]` and is stored in `C[I][J]` by the statement:

```
C[I][J] = A[I][J] + B[I][J]
```

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