Matrices (30%)

Problem ID: mt2p3

A matrix is a two-dimensional array, arranged in rows and columns.

$$A_{i,j} = \begin{pmatrix} a_{1,1} & a_{1,2} & \cdots & a_{1,j} \\ a_{2,1} & a_{2,2} & \cdots & a_{2,j} \\ \vdots & \vdots & \ddots & \vdots \\ a_{i,1} & a_{i,2} & \cdots & a_{i,j} \end{pmatrix}$$

Let us suppose two matrices $A = [a_{i,j}]$ and $B = [b_{i,j}]$, where i, j represents the element in row i and column j. Then, their addition $C = A + B$ is defined as $[c_{i,j}] = [a_{i,j} + b_{i,j}]$.

In this project, you should implement a matrix as a list of lists. Write a program that reads integers into two matrices, A and B, of dimension 2×3 (2 rows, 3 columns) and creates a new matrix $C = A + B$. Make sure that it is very easy to change the program to handle other dimensions.

You are **not** allowed to use any import statement in your solution, except `import typing`.

Input

The input consists of 12 lines, where each line contains an integer i, $1 \leq i < 100$. The first $2 \times 3 = 6$ lines contain integers for the first matrix A and the next 6 lines contain integers for the second matrix B. The first 3 lines for each matrix contains integers for the first row of the matrix, and the next 3 lines contain integers for the second row of the matrix.

Output

The output consists of the following three lines:

1. The list A representing the first input matrix.
2. The list B representing the second input matrix.
3. The list C representing $A + B$.

Sample Input 1

```
1
2
3
4
5
6
2
3
4
5
6
7
```

Sample Output 1

```
[[1, 2, 3], [4, 5, 6]]
[[2, 3, 4], [5, 6, 7]]
[[3, 5, 7], [9, 11, 13]]
```

Sample Input 2	Sample Output 2
11 2 34 7 56 26 22 33 14 15 66 79	[[11, 2, 34], [7, 56, 26]] [[22, 33, 14], [15, 66, 79]] [[33, 35, 48], [22, 122, 105]]