Problem A1

Mastering Matrix Multiplication (Weaker)

Time limit: 2.5s
Memory limit: 512 MB

This task is now due. Steven has redacted the problem statement. There are a few other potential randomized algorithm tasks that can be used for future iterations of CS3230 so this task is likely will be shelved for a few AYs ahead.

Input format

The first line of input contains an integer TC, denoting the number of test cases.

Each test case first starts with a blank line (as a visual separator for human reader — this should not cause too much problem for your code), then four groups of data:

- A line that contains four integers: n, x, y, and m,
- Then, n rows of x columns of integers that describe matrix A,
- Followed by y rows of m columns of integers that describe matrix B, and
- Finally by n rows of m columns of integers that describe matrix C.

Unfortunately for this problem, we need to explicitly provide the (big) input to you.

Therefore you need to use Fast/Buffered I/O methods for this task.

- For C++ users, use `ios::sync_with_stdio(false); cin.tie(NULL);` (or just use `scanf`),
- For Java users, use `BufferedReader` instead of `Scanner`,

- For Python users, use `import sys` and `sys.stdin.readlines()` to read all inputs into memory upfront.

Output format

For each test case, print the required answer.

Constraints

- $1 \leq TC \leq 77$;
- $1 \leq n, x, y, m \leq 77$;
- All integers present in the input matrix A and B will be between 0 to 7, inclusive;
- All integers present in the input matrix C will be between 0 to $max(x, y) \cdot 7 \cdot 7$, inclusive;
- We have fast enough Python 3 (PyPy), Java, and obviously C++ code to beat the time limit given problem A1 constraints.

Sample Input

Copy Input

```
3

2 1 2 3
1
7
2 5 1
2 5 1
2 5 1
14 35 7

2 1 1 3
1
7
2 5 1
2 5 1
14 35 6

2 1 1 3
1
7
2 5 1
2 5 1
14 35 7
```

Sample Output

Copy Output

```
Inner matrix dimensions must agree
WA
AC
```

Notes

Dr Steven Halim.

Last used: CS3230, 17 Feb-03 Mar 2023 (yes, over recess week).