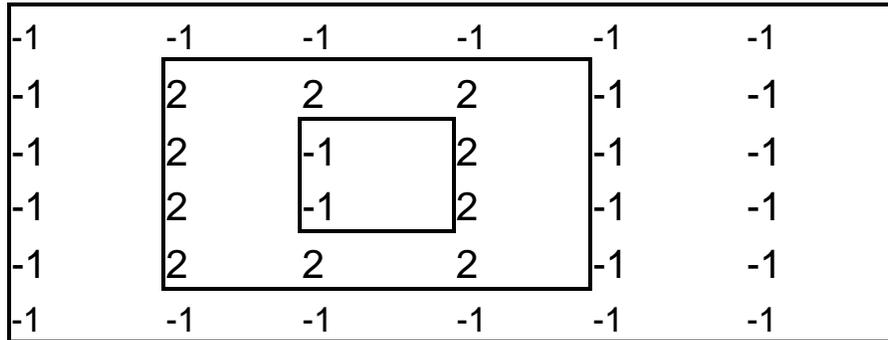


Problem D

Nested Rectangles

Input: Standard Input
Output: Standard Output

Sultan has a rectangle of R rows and C columns. Each cell of this rectangle contains an integer. Sultan chooses n subrectangles. The i 'th subrectangle has R_i rows and C_i columns and it is nested inside $(i-1)$ 'th subrectangle. The first subrectangle is nested inside the initial rectangle. Sultan then multiplies all the integers outside the first subrectangle with M_0 . Then he multiplies all the integers inside i 'th rectangle but outside $(i+1)$ 'th rectangle with M_i . Then he multiplies all the integers inside n 'th subrectangle with M_n . So he get a new rectangle of integers. The sum of all the integers of this new rectangle is S . Help Sultan to choose all this subrectangles in such a way so that S is maximized.



In the above figure, the outer most portion (that is not contained in any of the sub rectangle) is multiplied by M_0 , the portion inside the first rectangle, but outside the second one by M_1 , portion inside 2nd and outside 3rd by M_2 , and so forth. The portion inside the N th sub rectangle is multiplied by M_n .

Input:

First line of the input contains $T(\leq 20)$ the number of test cases. First line of the each test case contains 3 integers $R(1 \leq R \leq 500), C(1 \leq C \leq 500)$ and $n(1 \leq n \leq 5)$. Second line contains n integers $R_1, R_2, \dots, R_n (R > R_1 > R_2 > \dots > R_n)$. Third line contains n integers $C_1, C_2, \dots, C_n (C > C_1 > C_2 > \dots > C_n)$. The values R_i, C_i describes the dimensions of the i 'th sub rectangle. Fourth line contains $n+1$ integers $M_0, M_1, \dots, M_n (-10 \leq M_i \leq 10)$, the values of each multiplier. Lines 5 to line $4+R$ each contain C integers. The j 'th integer in the $(i+4)$ 'th line is the number in the i 'th row and j 'th column of the initial rectangle. All the integers in the initial rectangle is between -100 to +100 inclusive.

Output:

For each test case output contains one integer denoting the maximum value of S .

Sample Input	Sample Output
1 6 6 2 4 2 3 1 0 1 -1 -1 -1 -1 -1 -1 -1 -1 2 2 2 -1 -1 -1 2 -1 2 -1 -1 -1 2 -1 2 -1 -1 -1 2 2 2 -1 -1 -1 -1 -1 -1 -1 -1	22

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