

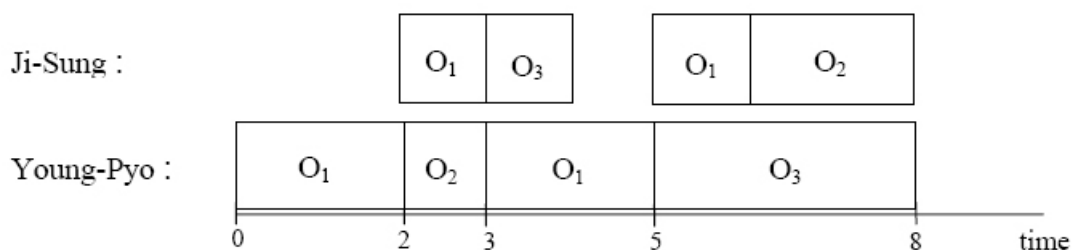
## 3605 Roommate

A college student Ji-Sung has a roommate, Young-Pyo, who shares a room with him in the dormitory. Since they have lived together for a long time, they also share household facilities, for example, a hair dryer, an electric iron, a battery charger, etc. So the time periods when they want to use one facility should not overlap.

Some day, Ji-Sung and Young-Pyo both have a sequence of facilities  $O_{i_1}, O_{i_2}, \dots, O_{i_n}$  and  $O_{j_1}, O_{j_2}, \dots, O_{j_m}$ , respectively, which they want to use in this order. Here a facility can be used more than once, that is,  $O_{i_k} = O_{i_l}$ , for some  $k, l$ . It takes  $p_i$  and  $q_i$  time units that Ji-Sung and Young-Pyo use the facility  $o_i$ , respectively. The problem is to minimize the finishing time by which they have used all facilities.



For example, Ji-Sung and Young-Pyo share household facilities  $O_1, O_2, O_3$  which they use during 1, 2, 1 and 2, 1, 3 time units, respectively. At some day, they use the facilities  $O_1, O_3, O_1, O_2$  and  $O_1, O_2, O_1, O_3$  in order, respectively. Then the following figure represents the schedule which minimizes the finishing time. The minimum finishing time is 8 in this example.



### Input

Your program is to read from standard input. The input consists of  $T$  test cases. The number of test cases  $T$  is given on the first line of the input. The first line of each test case contains an integer  $n$ ,  $1 \leq n \leq 50$ , the number of facilities. The second and third line of each test case contain a sequence of  $n$  integers between 1 and 100, where the  $i$ -th number,  $1 \leq i \leq n$ , represents the number of time units during which Ji-Sung and Young-Pyo use the facility  $i$ , respectively. The fourth line of each test case contains two integer numbers  $\alpha$  and  $\beta$ ,  $1 \leq \alpha, \beta \leq 300$ , the lengths of the sequences of facilities which Ji-Sung and Young-Pyo will use at the day, respectively. The fifth and sixth line of each test case contain a sequence of integers between 1 and  $n$ , representing a sequence of facilities which Ji-Sung and Young-Pyo will use in order at the day, respectively.

### Output

Your program is to write to standard output. Print exactly one line for each test case. The line contains the minimum time by which both Ji-Sung and Young-Pyo finish to use all the facilities.

**Sample Input**

```
3
2
1 2
2 1
2 2
1 2
1 2
2
2 1
1 3
3 2
1 2 1
2 1
3
2 1 3
1 2 1
4 4
1 2 1 3
1 3 1 2
```

**Sample Output**

```
4
6
8
```