Algorithmic Trading Profits

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Algorithmic trading is a method of executing a large order using automated pre-programmed trading instructions. There are many algorithms online that offer diverse strategies to trade.

Historical data of a stock is analyzed over four different algorithms a, b, c & d. The analysis shows that in n days maximum profit is made if:

- The algorithm used on the $(i)^{th}$ day is not used on both $(i-1)^{th}$ and $(i-2)^{th}$ day.
- For the 1^{st} day any algorithm can be used and for the 2^{nd} day, an algorithm other than the one used on the 1^{st} day can be used.

The forecasted profit a_i, b_i, c_i & d_i made using each algorithm is given for the next w days. Find the maximum profit that can be made incorporating the above analysis.

Input Format

The first line of input contains a positive integer q denoting the number of queries.

Input for each query is described below:

The first line contains one positive integer w denoting the number of days.
The next w lines contain 4 integers a_i, b_i, c_i & d_i denoting the forecasted profit made by each algorithm on the i^{th} day.

Constraints

- $1 \leq q \leq 10^2$
- $1 \leq w \leq 10^3$
- $1 \leq a_i, b_i, c_i, d_i \leq 10^8$

Output Format

Return an integer, representing the maximum profit made.

Sample Input 0

```
1
2
10 20 30 40
60 70 80 110
```

Sample Output 0

```
140
```