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ICPC亚洲区域赛银川赛站网络预选赛

D. Li Bai's Boat Ride

Time Limit: 3 s

Memory Limit: 16 MB

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Description

All rivers run into sea, tolerance is a virtue.

Streams join rivers and rivers enter the sea.

Any stream can converge into a river. The width of the river is the sum of the width of the original convergent stream.

Many streams will eventually converge into rivers of the same width and go hand in hand.

Li Bai was about to go by boat when he heard the singing of stepping on the shore. Peach blossom pool is thousands of feet deep, not as good as Wang Lun sent me love.

Li Bai was sailing on the river in a boat.

Li Bai hoped that the boat would pass through every river of equal width, which he thought was more poetic.

The width of the river must be greater than or equal to the width of the boat before the boat can pass through.

At least one river can make Li Bai's boat run.

Li Bai hopes to have as many rivers of the same width as possible for the boat to sail, so that he can enjoy more scenery.

Clever you, can you help him do it?

Input

The first line has a positive integer T ($1 \leq T \leq 30$), which indicates that there are T cases of test data.

Each case of test data input takes up two lines.

The first line has two positive integers M ($1 \leq M \leq 65$) and N ($1 \leq N \leq 65$). M represents the width of the boat; N represents the number of streams.

And the next line has N positive integers (each positive integer ≤ 65), representing the corresponding width of the stream.

Output

Each case of test data outputs takes up one line and is a positive integer. Expresses the widths of the largest number of rivers that can be synthesized, these rivers are of the same width and can be passed by boats.

Examples

input :

```
2
5 8
5 2 1 5 1 5 1 4
5 5
1 2 3 4 5
```

output :

```
6
5
```



(<http://112.126.101.92/contest/1/problem/4?locale=zh-cn>)



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