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# Buzz and Nectar

Once upon a time, there was a diligent bee named Buzz. Buzz had a very important task to accomplish. There were wers in a garden, and each flower had a specific amount of nectar represented by flowers[i]. Buzz needed to collect all the nectar from these flowers before the sunset, when the flowers would close up and the nectar would no longer be accessible.

The guards of the garden had gone on a break and would return in Z hours. Buzz knew that he had limited time to collect the nectar, but he also wanted to savor the sweet taste of each flower.

Buzz could control his nectar-collecting speed X and decided to optimize his strategy to make sure he collected all the nectar before the guards returned. He had to determine the minimum speed at which he could collect the nectar, so he wouldn't waste any time and would enjoy each flower to the fullest.

If Buzz collected nectar from a flower at a speed greater than the amount available in the nectar, he would collect the entire nectar and move on to the next flower. However, if a flower had less nectar than his collecting speed, he would collect all the nectar available and not revisit that flower during that hour.

Can you help Buzz determine the minimum collecting speed X he needs to ensure he gathers all the nectar before the guards return in Z hours?

## Input Format

- The first line of input will contain a single integer $N$, denoting the number of flowers in garden.
- The second line of input will contain a single integer $Z$, denoting the time after which guard returns.
- The third line of input is an array whose values are the amount of nectar each flower has.

## Output Format

The output will be an integer value , denoting the minimum collecting speed.

## Constraints

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The output will be an integer value , denoting the minimum collecting speed.

### Constraints

- $1 \leq N \leq 10000$
- $N \leq Z \leq 10^9$
- $1 \leq flower[i] \leq 10^9$

### Sample 1:

| Input | Output |
| --- | --- |
| 4<br>8<br>9 6 4 11 | 5 |

### Explanation:

If the buzz collects 5 nectar per hour then buzz can complete the whole within 8 hours. First 9 nectar in 2 hours, next 6 nectar in 2 hours, next 4 nectar in 1 hour, next 11 nectar in 3 hour. So total 8 hours needed.

### Sample 2:

| Input | Output |
| --- | --- |
| 5<br>5<br>23 19 2 4 22 | 23 |

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# Pixelonia

In the kingdom of Pixelonia, where the inhabitants were avid enthusiasts of a unique game called LaserQuest, the fate of each match rested in the hands of 4 vigilant referees. LaserQuest, a fast-paced game involving laser guns and strategic tactics, required precise judgement from the referees to determine whether players were hit or remained unscathed i.e miss . The 4 referees diligently observed every laser beam fired and every evasive move executed by the players. In the LaserQuest tradition of Pixelonia, laser beam would only be considered "hit" if all 4 referees unanimously agreed that a laser beam had successfully struck the target else it's a miss .

Can you help to provide the final verdict ?

## Input Format

- The first line of input will contain a single integer $T$, denoting the number of test cases.
- The second line will take an integers D1, D2, D3, D4 denoting the decision of the referee . Here D can be 0 or 1 where 0 denotes HIT and 1 denotes MISS.

## Output Format

For each test case, output on a new line . It will be a string HIT or MISS.

## Constraints

- $1 \leq T \leq 20$
- $0 \leq D1, D2, D3, D4 \leq 1$

## Sample 1:

| Input | Output |
| --- | --- |
| 4 | MISS |

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- $0 \leq D1, D2, D3, D4 \leq 1$

## Sample 1:

| Input | Output |
| --- | --- |
| 4<br>1 1 0 0<br>0 0 0 0<br>0 0 0 1<br>1 1 1 1 | MISS<br>HIT<br>MISS<br>MISS |

## Explanation:

In first case there is atleast one referee who is taking decision of MISS so overall output is MISS.

In second case all referees are taking decision of HIT so overall output is HIT.

In third case there is atleast one referee who is taking decision of MISS so overall output is MISS.

In fourth case there is atleast one referee who is taking decision of MISS so overall output is MISS.

| Accepted | Submissions | Accuracy |
| --- | --- | --- |
| 278 | 601 | 68.05 |

Did you like the problem statement?

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# Mathematical Challenge

In a town known for its love of numbers and puzzles, a young prodigy named Sumit encountered an intriguing challenge. They were given an array of integers called "A" and tasked with rearranging the elements to maximize a score. A score is counted when there is any positive number after performing prefixsum. With unwavering determination, Sumit embarked on a mathematical journey, exploring various arrangements until they discovered the optimal solution.

Now, the town turns to you, with hopeful anticipation and a shared desire to witness Alex's triumph. Can you lend your expertise and computational prowess to assist Alex in rearranging the puzzle and uncovering the arrangement that yields the maximum score?

## Input Format

- The first line of input will contain a single integer $T$, denoting the number of test cases.
- Each test case consists of multiple lines of input.
  - The first line will take an integer $N$ the length of the array .
  - The second line contains $N$ space-separated Integer .

## Output Format

For each test case, output on a new line the maximum score number.

## Constraints

- $1 \leq T \leq 100$
- $1 \leq N \leq 100000$
- $-1000000 \leq A[i] \leq 1000000$

## Sample 1:

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## Sample 1:

| Input | Output |
| --- | --- |
| 2<br>7<br>4 1 -5 3 2 -2 0<br>3<br>-1 -3 -2 | 7<br>0 |

## Explanation:

First test case: We can rearrange the array into A= [4, 1, 2, 3, 0, -2, -5]. prefix = [4, 5, 7, 10, 10, 8, 3], so the score is 7. It can be shown that 7 is the maximum score we can obtain.

Second test case: Explanation: Any rearrangement of the array will result in a score of 0. Regardless of the arrangement, there are no positive integers in the prefix sums. Therefore, the maximum score we can obtain is 0.

| Accepted | Submissions | Accuracy |
| --- | --- | --- |
| 74 | 797 | 11.79 |

Did you like the problem statement?

3 users found this helpful

More Info