Do it for the kids, Chuck! P25738_en

A gang of n vicious drug dealers is surrounding Walker, the world's favourite Texas ranger. But do not worry! This would be a critical situation for most people, but not for Walker. He can hit all of them with just a single of his "spinning kicks".

However, as this is a TV series, the co-guionist Aaron Norris has reminded his brother (the great actor Chuck Norris starring as Walker) that he should take care of several restrictions:

- Drug dealers can only be hitted increasingly, from drug dealer 1 to drug dealer n. (This is because of the location of the camera.)

- Walker can only hit each drug dealer i at some specific time t_i known in advance. (This is due to the insurance that any actor working with Chuck has to take.) Therefore, Walker cannot hit two drug dealers $i < j$ such that $t_i > t_j$ with the same spinning kick.

- The time between two hits should be at least 10 ms. (Even a slow motion camera cannot properly film Chuck's kicks if they are too quick.) This implies that Walker cannot hit with the same kick two drug dealers $i < j$ such that $t_j - t_i < 10$ ms.

– "We must follow these rules, Chuck", Aaron says. "I'm sure it's not hard for you to find the maximum number of guys you can hit with a single spinning kick under these restrictions."

– "Indeed, it is not", Chuck replies after thinking for a couple of microseconds.

– "Then, Chuck, please, follow these rules. Do it for the kids, Chuck!"

– "Alright."

Can you write a program to compute the maximum number of drug dealers that Chuck can hit with a single spinning kick under the given restrictions?

Input

Input begins with a number $t \geq 0$. Follow t test cases, each with the number $0 < n \leq 2000$ of drug dealers, followed by $t_1, \ldots, t_n$ in ms. Each t_i satisfies $0 \leq t_i \leq 10^9$. (Chuck can really give such loooong spinning kicks. Indeed, he is a 6-time Karate World Champion!)

Output

Print t lines with the answers.

Observation

Due to his Cherokee upbringing, Chuck can solve this problem in $\Theta(n \log n)$ time. But *you* may be not as good a programmer as Chuck, so the Judge will accept quadratic solutions.

Sample input 1

```
6
2 2000 2010
3 7000 7009 7018
4 8000 7000 6000 5000
1 100
10 0 11 45 23 30 48 19 11 60 73
13 84 85 94 105 45 107 32 68 45 109 67 77 120
```

Sample output 1

```
2
2
1
1
6
5
```

Problem information

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