

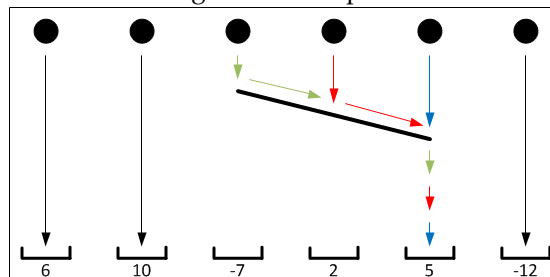
Algorithms Lab

Exercise 4 – Pinball

During your last archaeological excavation in Scotland, you found a star map that might lead you to an answer to the question about the origins and the purpose of the mankind. However, since the star map is pointing to a planet which is far far away, and the rest of your crew are quite boring people, you have to find a way to amuse yourself for the next couple of years (how much it takes to get to that planet).

Fortunately, beside the star map, you also discovered an ancient version of a pinball game, probably of an alien origin. This version has n balls, each placed above a hole (as in the picture), and you have to place *exactly one* obstacle that is tilted strictly to the right. Your obstacle must cause at least one ball to fall into a hole that is not directly below it. Each hole has a number of points associated with it, and for each ball that falls into it you get that many points. Your goal is to achieve the largest possible score!

Figure 1: Example.



Input The first line of the input contains $t \leq 6$, the number of testcases. Each test case starts with one line containing the number of holes (which is also the number of balls) $2 \leq n \leq 300000$, followed by a line which contains n numbers, specifying number of points associated with each hole, from left to right. Points are integers in the interval $[-2^{31}, 2^{31})$.

Output For each test case you should output a line containing the maximum score you can achieve.

Sample input

```
3
6
6 10 -7 2 5 -12
5
1 6 1 2 2
5
5 4 3 2 1
```

Sample output

```
19
17
14
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