Problem B - Bulbasaur Charity

Jonathan is exploring the land of PokeCountry. PokeCountry consists of exactly n cities, and every two cities are connected by a road. In order to make their country more colourful, the cities decided to decorate the roads with Bulbasaurs. A city i decides to place A_i Bulbasaurs on every road connected to it. As all PokeTrainers know, Bulbasaurs are usually very kind to travellers. So kind that each Bulbasaur hands out one gold coin to a traveller who walks down the road. However, due to a clerical error, some values of A_i were accidentally set to be negative, placing evil Bulbasaurs on roads instead. An evil Bulbasaur takes away one gold coin from a traveller, even possibly putting them in debt (making the traveller have a negative amount of gold coins).

Jonathan wants to journey through the land of PokeCountry, starting at one city and ending at another (possibly the same city without travelling at all), never visiting a city more than once. What is the maximum amount of gold coins Jonathan can get? Note that a valid journey is to just stay at one city.

Input

The first line will contain an integer T, denoting the number of test cases. T test cases follow. Each test case will consist of two lines. The first line has two integers, n ($2 \leq n \leq 10000$) and m ($1 \leq m \leq 10000$). The second line has n space separated integers in the interval $[-m, m]$ representing the sequence A_i.

Output

For each test case, output the maximum amount of gold coins Jonathan can get.

Sample Input

```
1
3 3
1 2 3
```

Sample Output

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9
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