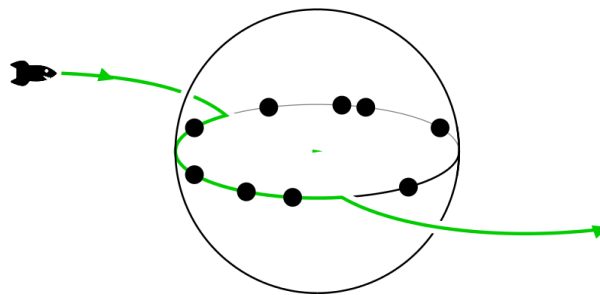


Problem E. Equator

Source file name: equator.c, equator.cpp, equator.java
Input: standard
Output: standard

In a galaxy far away, the planet *Equator* is under attack! The evil gang *Galatic Criminal People Cooperation* is planning robberies in Equator's cities. Your help is needed! In order to complete your training for becoming a lord of the dark side you should help them deciding which cities to rob.

As the name says, the desert planet Equator only can be inhabited on its equator. So the gang lands there at some point and travels into some direction robbing all cities on their way until leaving the planet again.



But what is still open for them is to decide where to land, which direction to take, and when to leave. Maybe they shouldn't even enter the planet at all? They do not consider costs for traveling or for running their ship, those are peanuts compared to the money made by robbery!

The cities differ in value: some are richer, some are poorer, some have better safety functions. So the gang assigned expected profits or losses to the cities. Help them deciding where to begin and where to end their robbery to maximize the money in total when robbing **every** city in between.

Input

The input starts with the number of test cases $T \leq 30$. Each test case starts a new line containing the number of cities $1 \leq n \leq 1000000$. In the same line n integers c_i follow. Each c_i ($0 \leq i \leq n$, $-1000 \leq c_i \leq +1000$) describes the money obtained when robbing city i , a negative c_i describes the amount of money they would lose.

Output

For each test case print one integer describing the maximum money they can make in total.

Example

Input	Output
3	6
3 1 2 3	14
8 4 5 -1 -1 1 -1 -1 5	0
2 -1 -1	