

Q1 (10 marks) Foreign Exchange

A Foreign Currency Exchange predictor predicts the price of US Dollar vs Thai Baht to go up or down relative to the previous day. 0 means the price remains the same as the day before. A positive value means the price increases by that amount, and the negative value means the opposite. You can buy and sell the US Dollars only once during the next n days.

NOTE You can start buying on day 0, which means that you can sell as early as the first day of the prediction.

INPUT

A list of n integers, representing predicted the change of price, in US Dollars per 10000 Thai Baht, in the next n days; $n \leq 10000$

OUTPUT

The maximum profit you may earn, in US Dollars per 10000 Thai Baht, based on the predicted price changes

EXAMPLE

INPUT	OUTPUT
-1 -2 -3	0
1 2 3 4 5	15
5 4 -3 1 2	9