2. [10 Marks] You are considering buying and selling a stock. Your stock-prediction software estimates the stock price for the next n hours for you. Assuming that the predicted prices are correct, you want to know the maximum profit that you may earn from one time of investing in this stock.

   Write a program to determine the maximum possible profit that may be earned from ONE TIME of buying a unit of this stock and selling it.

   INPUT:

   A sequence of n numbers separated by a space; the stock price (per unit) in the next n hours, $1 \leq n \leq 100000$ (up to more than 10 years)

   OUTPUT:

   One number; the maximum profit possible from one time of buying and selling a unit

   EXAMPLE

INPUT	OUTPUT
5 15 11 2 8 12 15 18	16
10 9 8 7 6 5	0

   NOTE: Only three test cases (out of 10) will have $n \leq 10000$

   HINT: Compute how price changes from day to day. The max profit is the total change that increases the most.