

## I. Moving Average

Time Limit: 3 seconds

### Problem description

In the pandemic covid-19, many countries report covid-19 cases daily. It results as the orange line in the graph below. It can be tough to understand how much something is increasing if you continuously see these peaks and valleys. If you only have the orange lines, you might wonder if this means the cases are going up, or down. Because this is very hard, statisticians like to graph something called “a moving average.” You can see an example of this in black line in the graph.

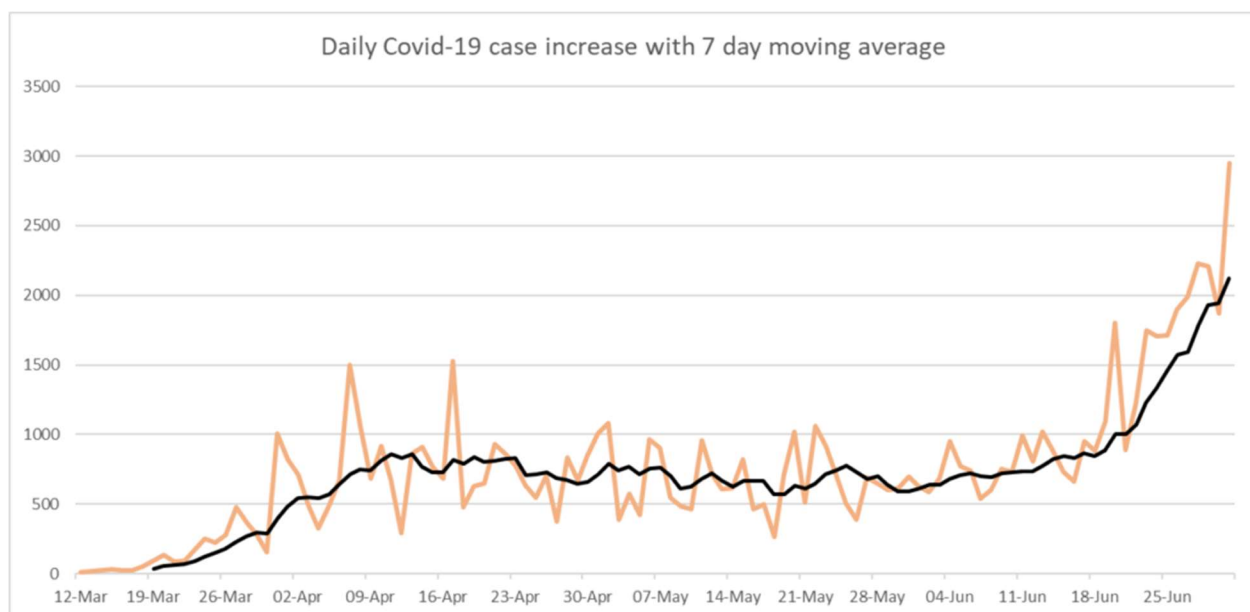


Figure I. 1 Daily Covid-19 case increase with 7 day moving average (source: Georgia Rural Health)

A moving average is that it takes the past days of numbers, takes the average of those days, and plots it on the graph. For a 7-day moving average, it takes the last 7 days, add them up, and divides it by 7. For a 14-day average, it will take the past 14 days.

For example, we have data on COVID starting March 12. For 7-day moving average, it needs 7 days of COVID cases: that is the reason it only starts on March 19. On The 19<sup>th</sup>, it added all the cases together between March 12 and March 19 and divided it by 7. It then plots that point. The next point, at March 20, uses March 13-20 for its average calculation. If you are thinking about it, you might realize that this indeed “moves” every day, which is why they call it a moving average.

For something like new cases of COVID, you can see why this can be handy: it provides you with an average line over time, and it knocks out these big peaks and valleys to the average over a period of time.

Nam would like to develop a program to report about COVID case by applying Moving Average technique above. Help him to compute the moving average graph point.

**Input:**

First line contains N and m values, where:

N: number of Covid case data points (  $0 < N \leq 10^7$  )

m: the day of moving to calculate m-day moving average (  $0 < m \leq 100$  )

Second line contains N data points  $d_i$  where  $0 < i \leq N$  and  $0 \leq d_i < 10^9$

**Output:**

A line contains:

- “Not Enough Data” if there is no enough m data points to compute m-day Moving Average
- (  $N - m$  ) integer data points  $MA_j$  result of m-day moving average where  $0 < j \leq N - m$  (  $MA_j$  is floor rounded value)

Example 1:

Input	Output
6 7 100 140 100 230 100 100	Not Enough Data

Example 2:

Input	Output
9 7 100 100 100 100 100 100 100 170 240	100 110