TIME SERIES – Graphically smoothing a time series using medians…
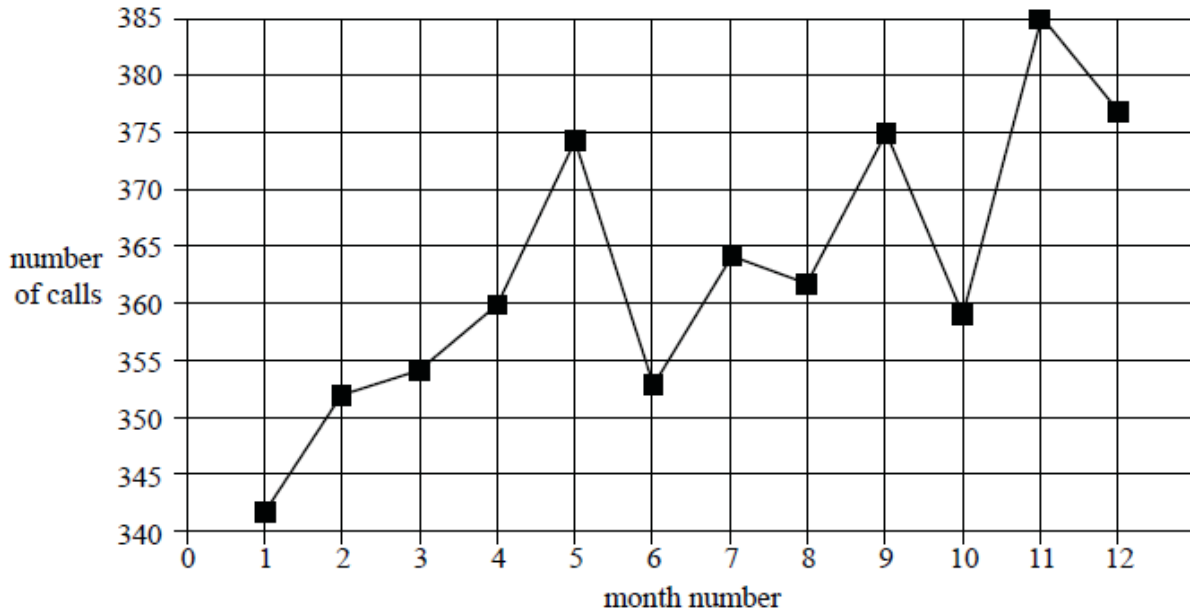
On the end-of-year examination there is an expectation that students can use a graphical technique to smooth a time series. If to be completed on a graph the technique required will be median smoothing. The purpose of this smoothing is to **remove any seasonal variation.** This allows us to more clearly see any **underlying trends** in the data.
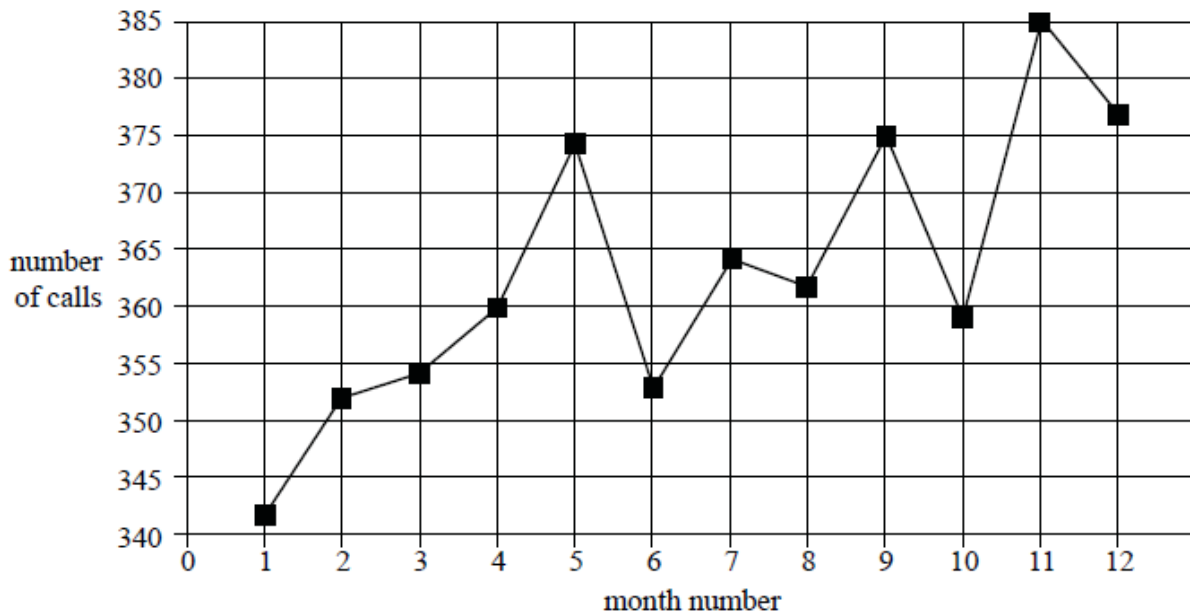
Use the following graphs to complete the required smoothing:

Question 1
a)   **3 median smoothing**
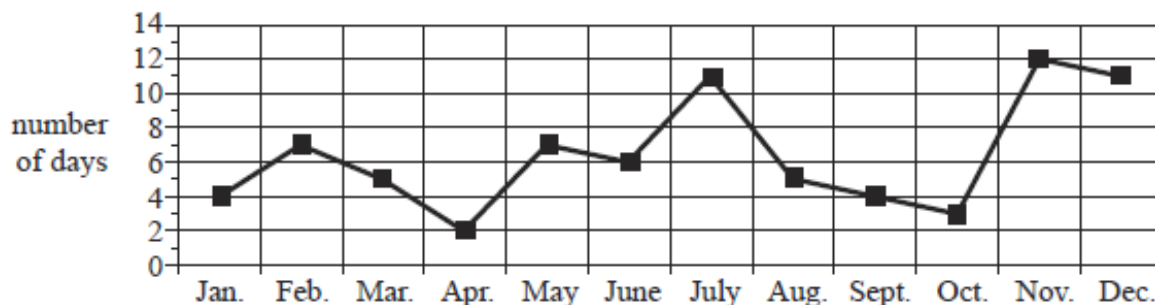

b)   **5 median smoothing**
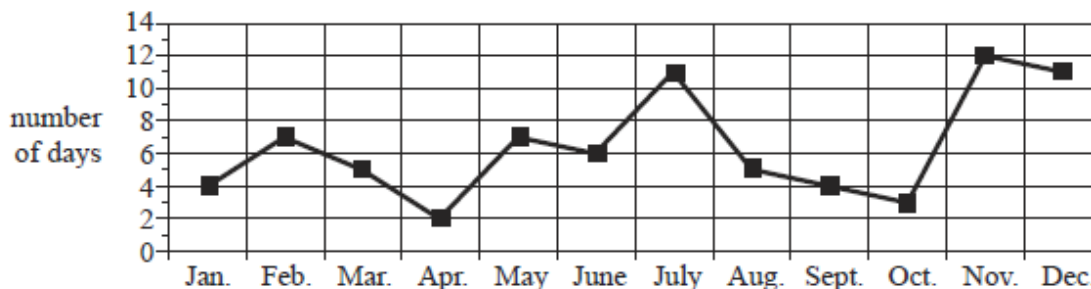
Question 2

a)   **5 point median smoothing**

The time series plot below shows the number of days that it rained in a town each month during 2011.
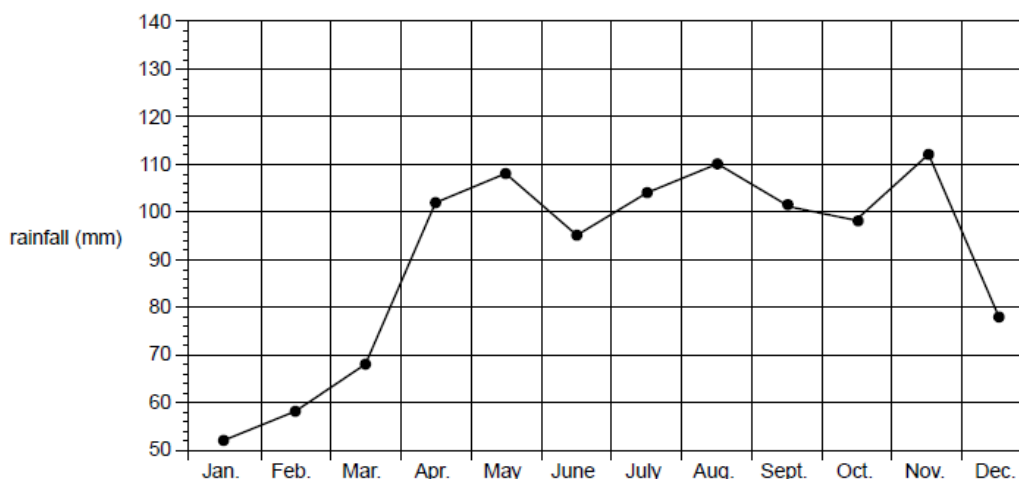

b)   **3 point median smoothing**

The time series plot below shows the number of days that it rained in a town each month during 2011.

Question 3

a)   **5 point median smoothing**

The time series plot below shows the rainfall (in mm) for each month during 2008.

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