

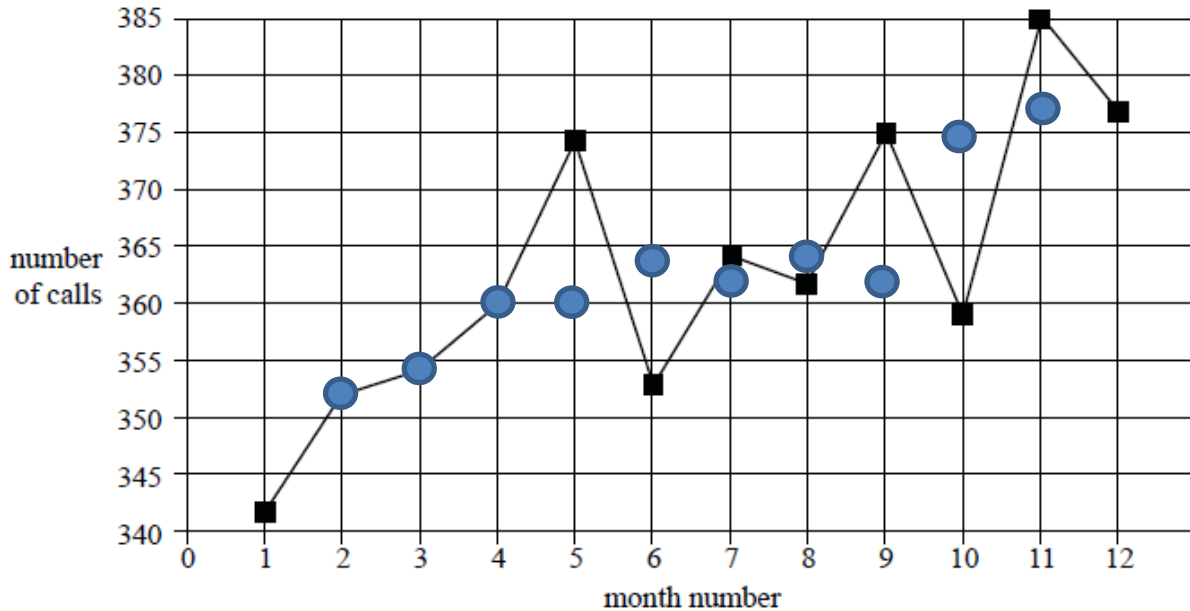
TIME SERIES - Graphically smoothing a time series using medians...

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.

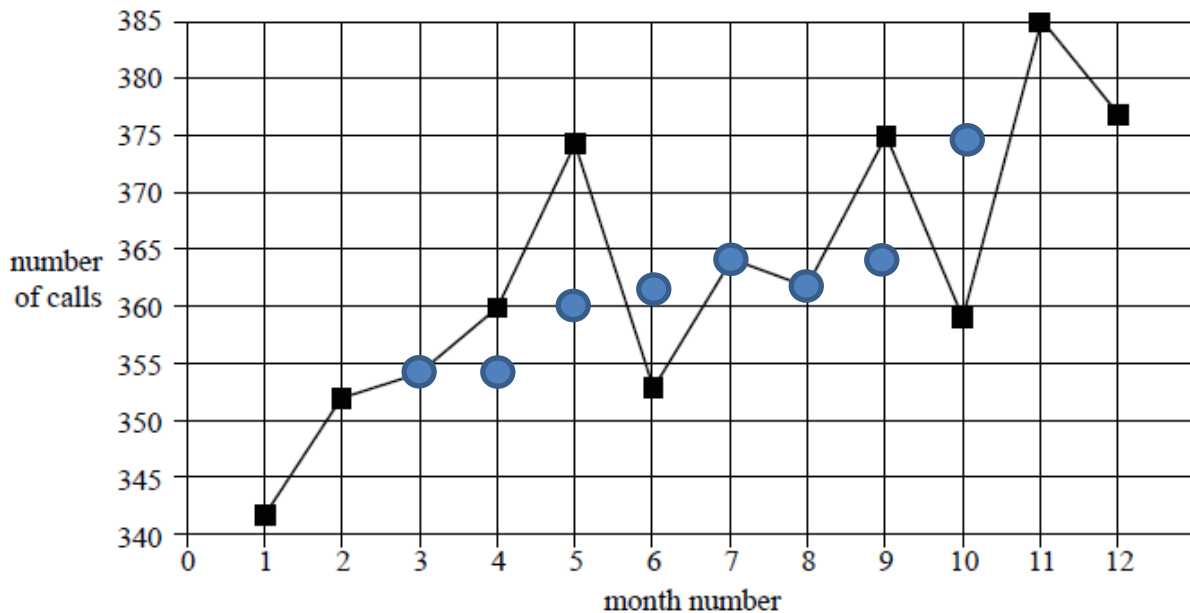
Use the following graphs to complete the required smoothing:

Question 1

a) **3 median smoothing**



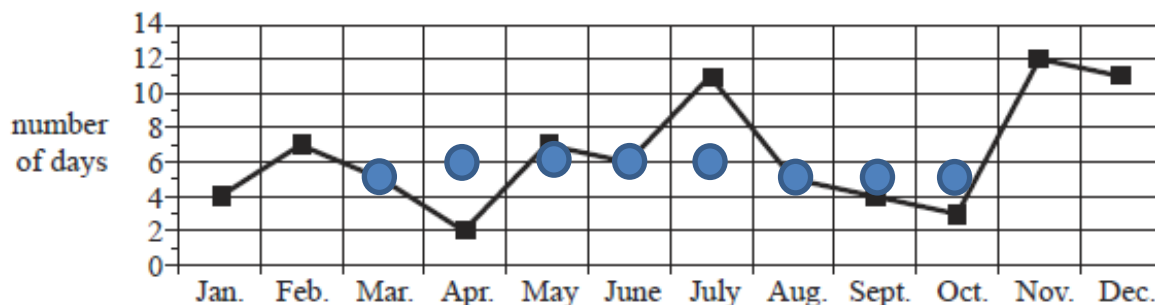
b) **5 median smoothing**



Question 2

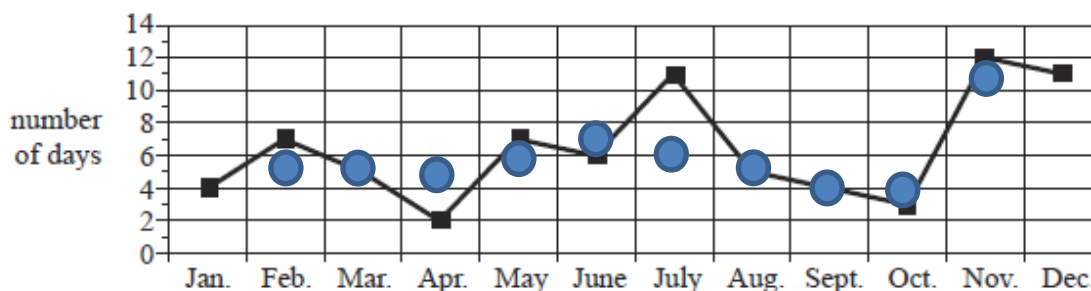
a) **5 point median smoothing**

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**

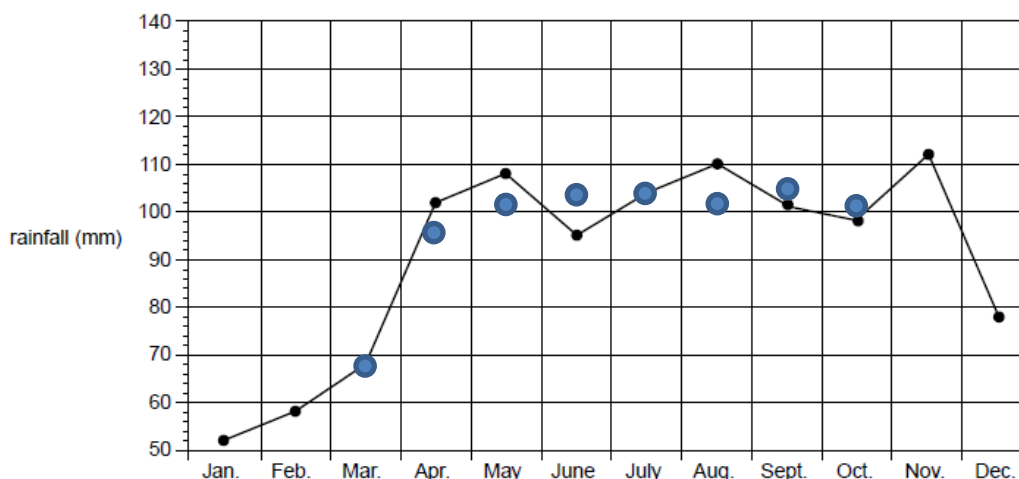
The time series plot below shows the number of days that it rained in a town each month during 2011.



Question 3

a) **5 point median smoothing**

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



a) **5 point median smoothing**

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

