CMPE 362

INTRO.TO SIGNAL PROC. FOR COMPUTER ENG.

MatLab

II. Project

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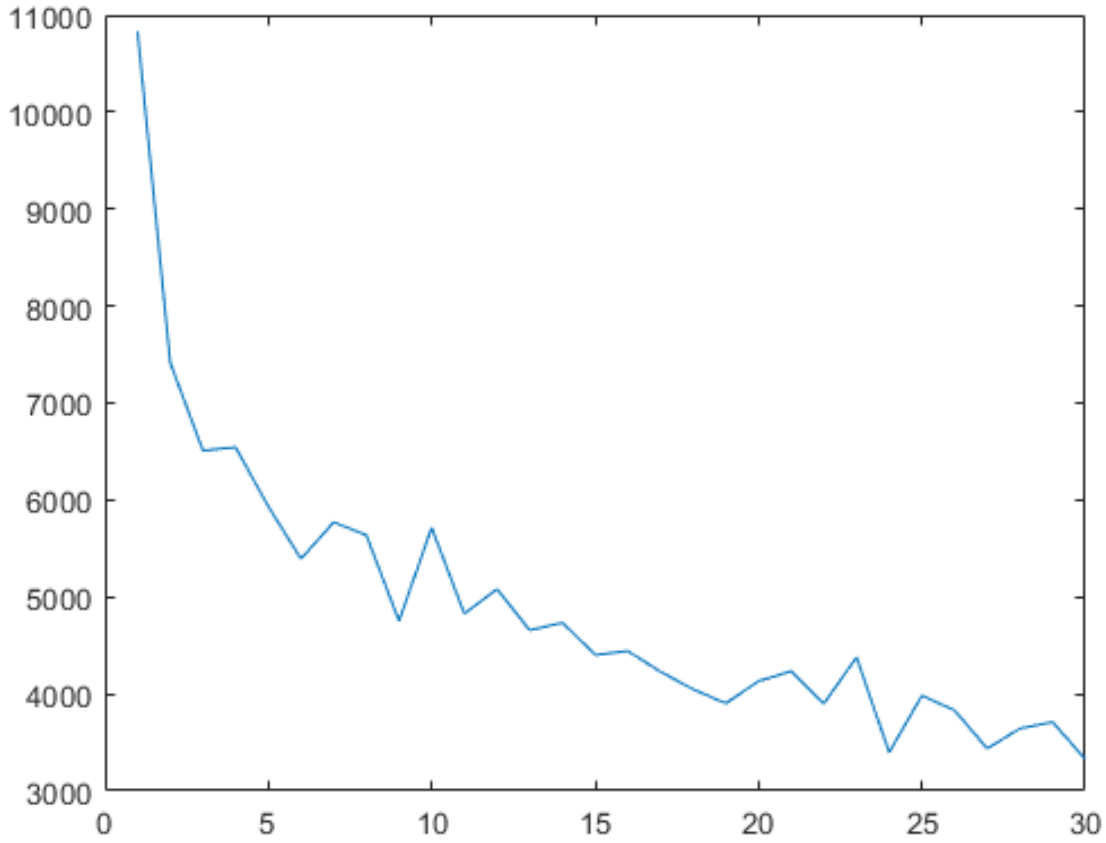
Problem 1

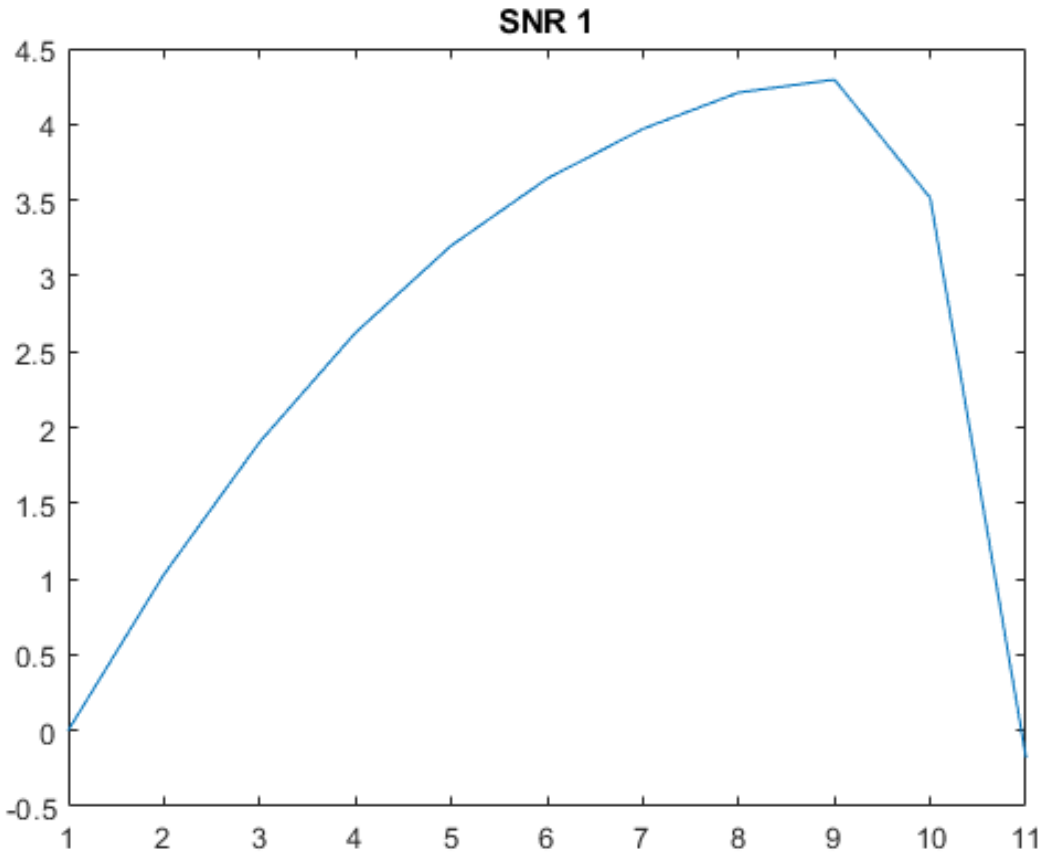


In this question, the number of peaks are decreasing in general. I think it is due to the fact that while N is increasing, moving average filter is including more and more datas in it. Moving average filter is smoothing the graph generally. So the number of peaks are decreasing as N increases.

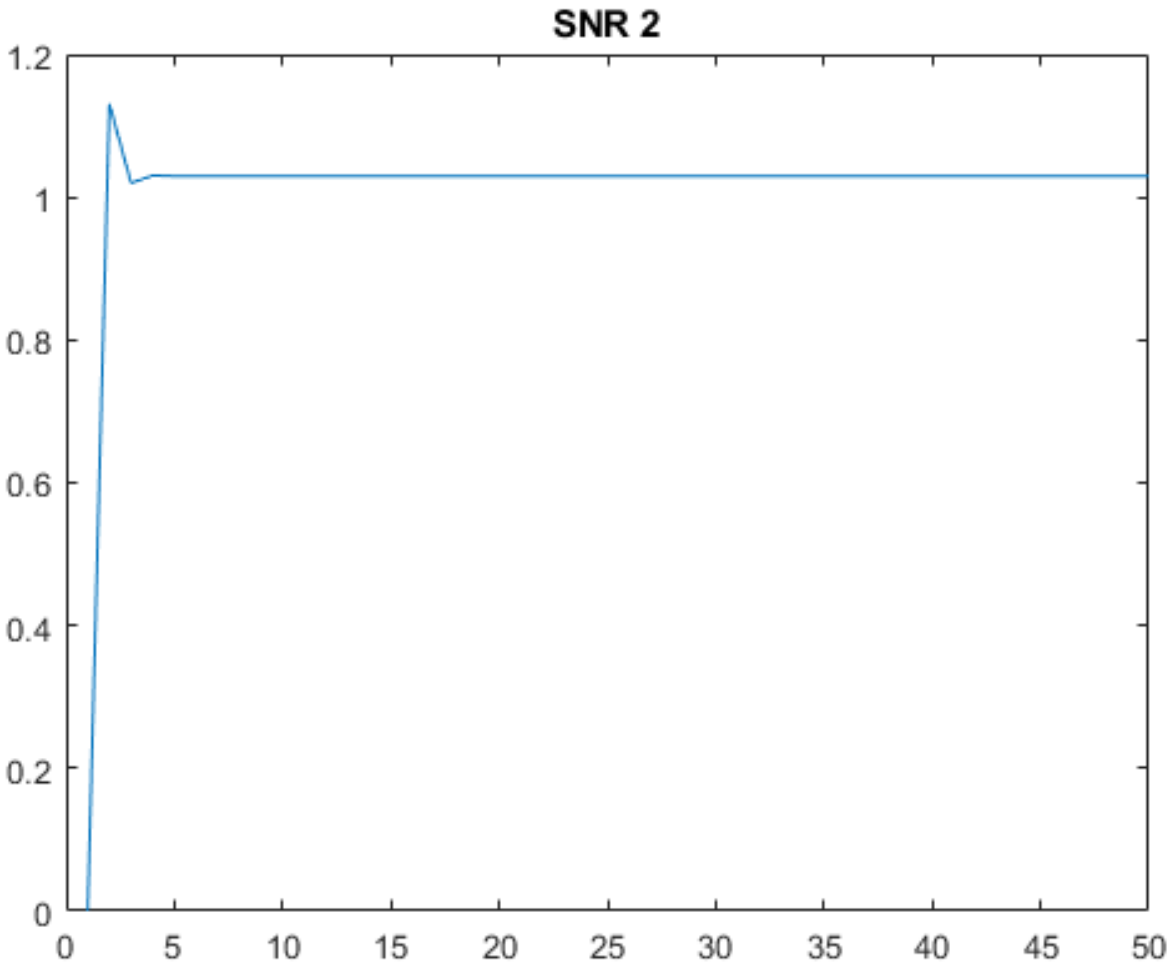
Problem 2

- At first exercise, we are arranging the data so that the frequency is quadrupled. It sounds like we play it in 4x fast motion.
- At the second exercise, we are arranging the data so that the frequency is halved. It sounds like we are playing it in slow motion.
- At the third exercise, we are doubling the Fs and it is like the first exercise, but not as fast as it.
- At the last exercise, we are halving the Fs and it is like the second one, but its quality is more than the second one.

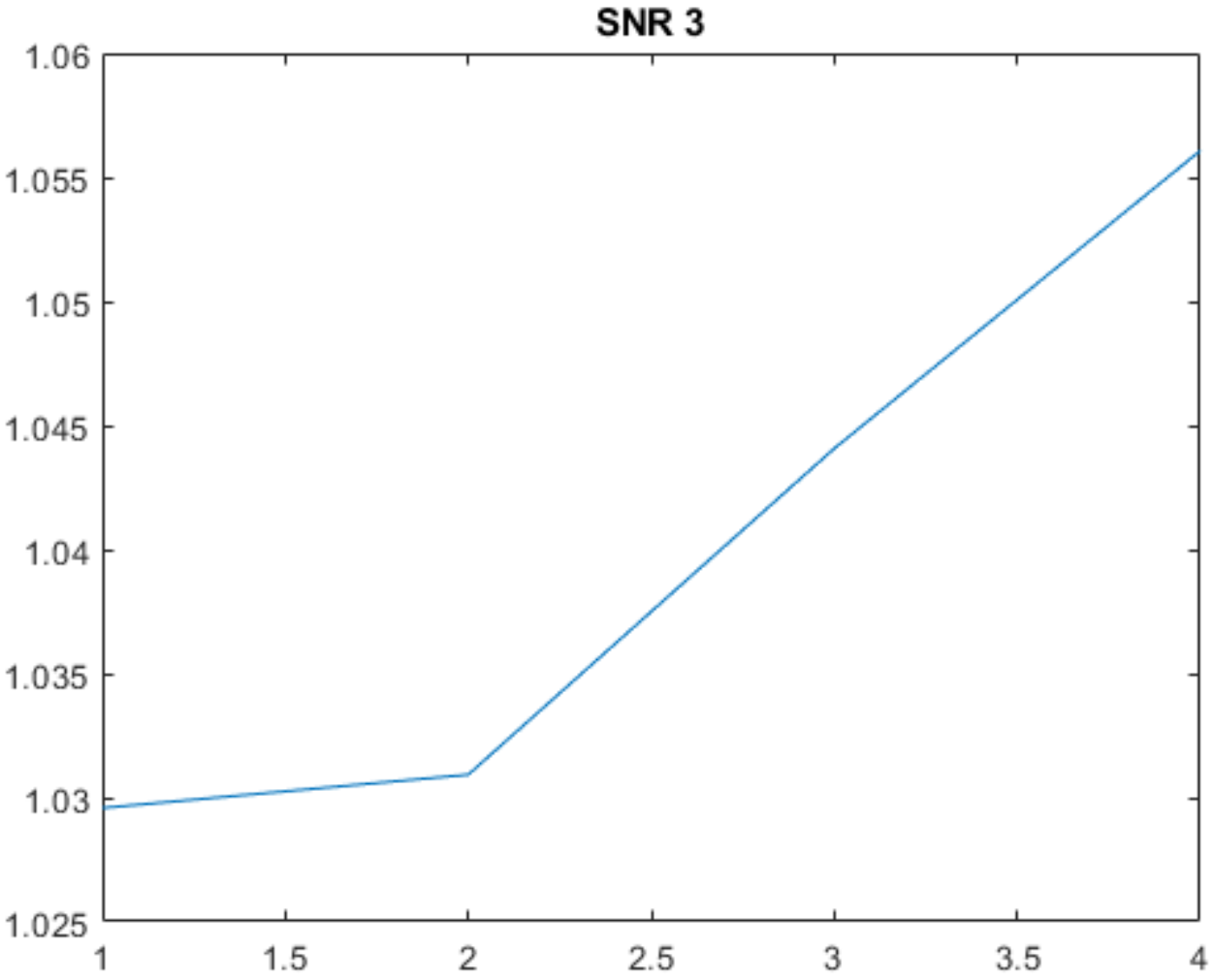
Problem 3



In first part, we observe that SNR value is near to 1 as alpha goes near to 0 and near to 1.



In second part, we observe that SNR value is near to 1 after N reaches to 6. After that it stays stable near to the value 1.



In the last part, we observe that SNR value is increasing as K increases from 100 msec to 400 msec.