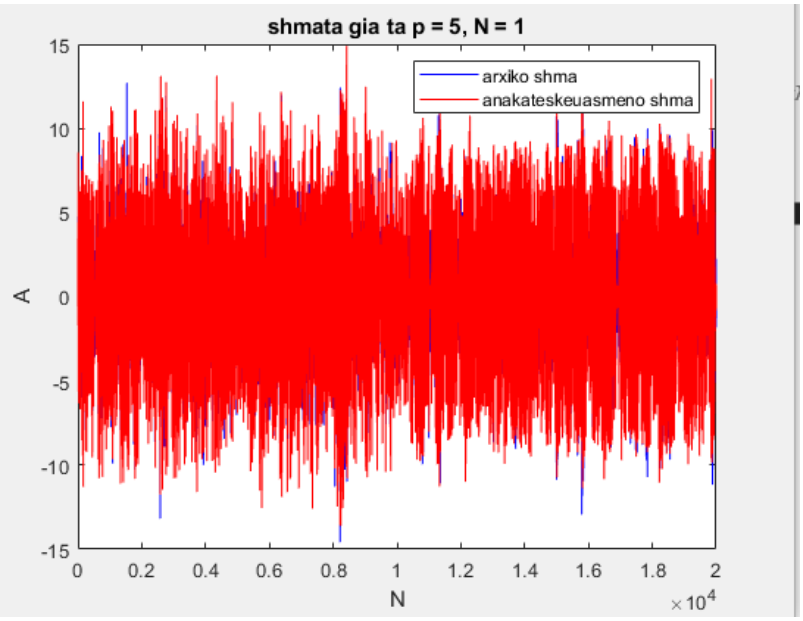
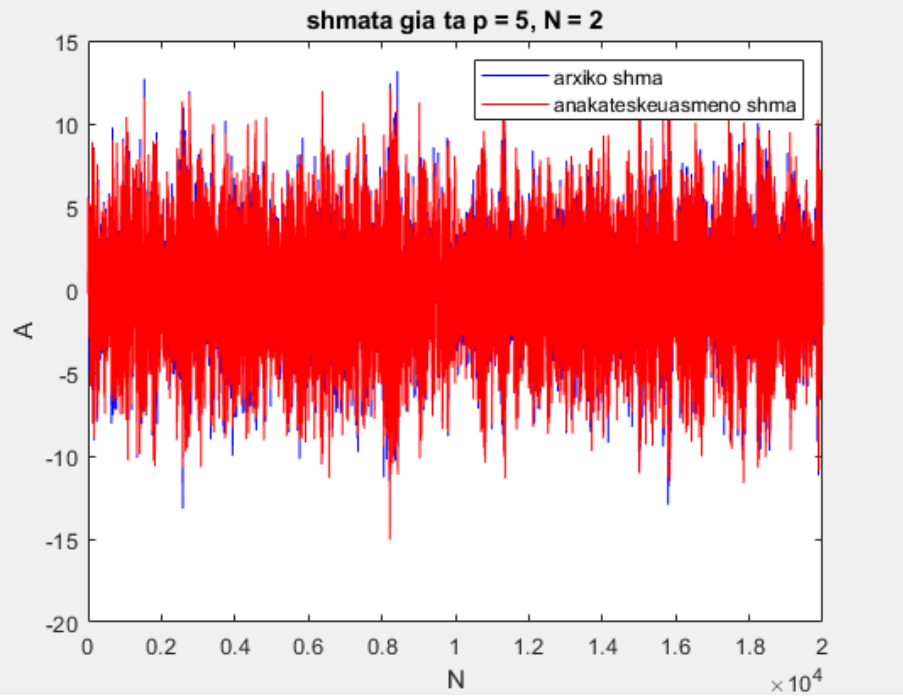
will create a loop as in the previous question but specifically for **p = 5** and **p = 10**. Then, I will simply plot the curves of the original signal and the reconstructed signal on the same graph.

for p=5 :

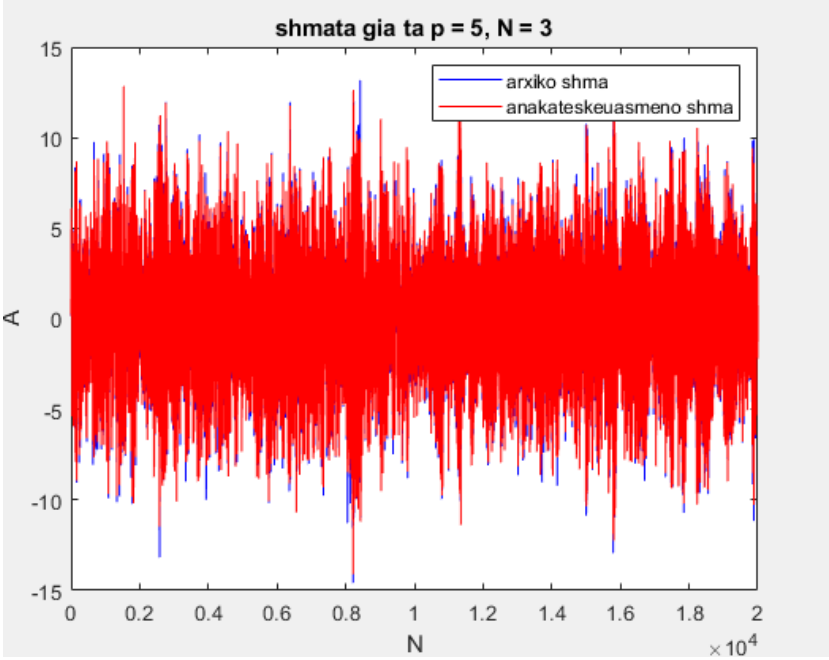
N=1



N=2

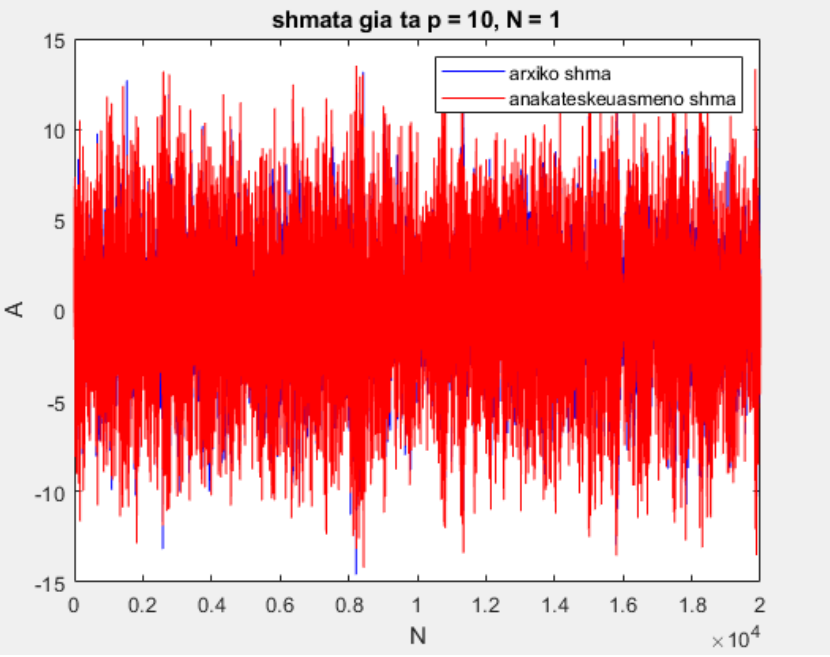


N=3

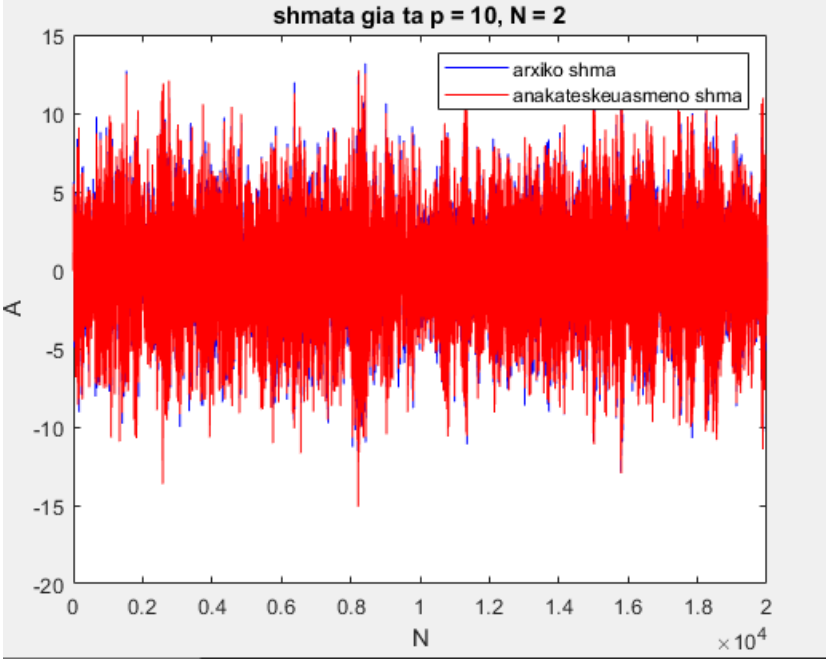

shmata gia ta p = 5, N = 3
arxiko shma
anakateskeuasmeno shma
A
N
×10^4

for p=10:

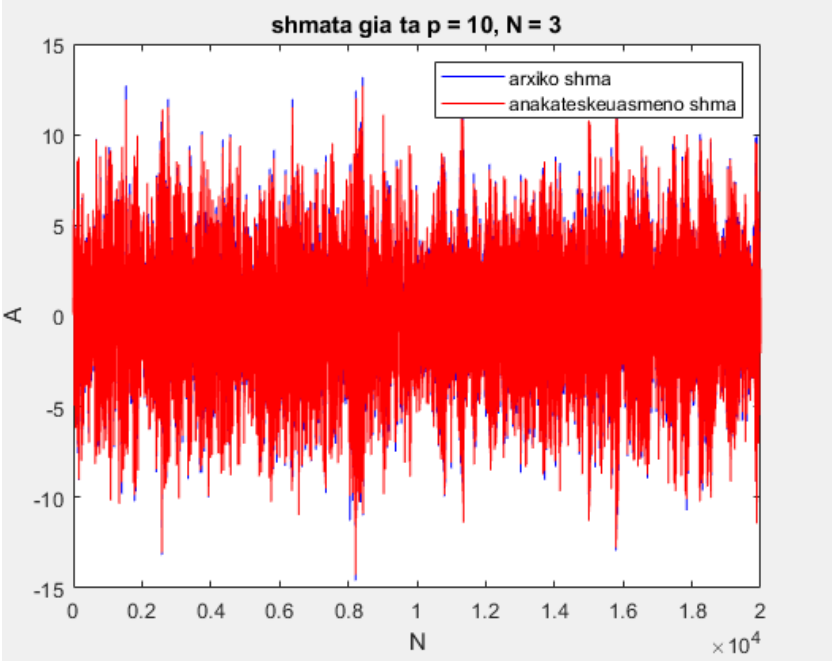
N=1


shmata gia ta p = 10, N = 1
arxiko shma
anakateskeuasmeno shma
A
N
×10^4

N=2


shmata gia ta p = 10, N = 2
arxiko shma
anakateskeuasmeno shma
A
N
×10^4

N=3


shmata gia ta p = 10, N = 3
arxiko shma
anakateskeuasmeno shma
A
N
×10^4

We can observe that **p** helps improve the quality of the reconstructed signal, but not as much as increasing **N**. It is visually noticeable that the reconstructed signal follows the original signal better as **N** increases, while with **p**, the changes are minimal and harder to detect. These findings coincide with those from the previous questions.