## Signals and Systems - Rate Change $\,$

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 $\mathrm{June}\ 1,\ 2022$ 

## Part 1

1

 $\mathbf{2}$ 

## Part 2

1

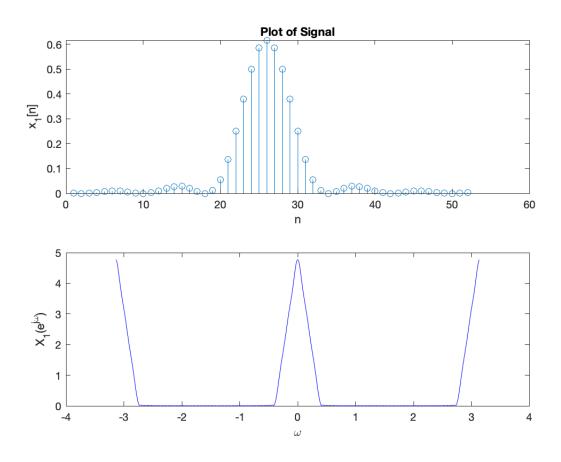


Figure 1: Plot of Signal

 $\mathbf{2}$ 

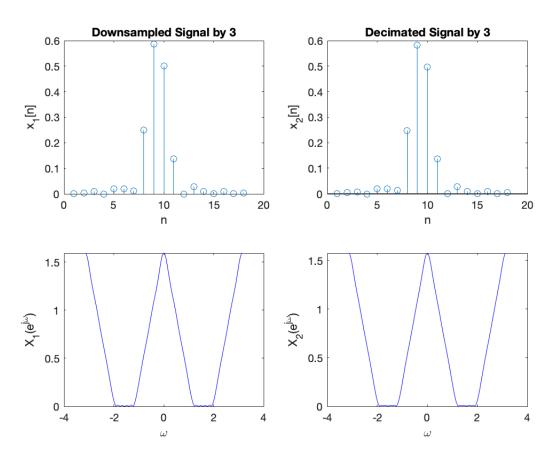


Figure 2: Downsampling by 3

There is no significant difference between downsample and decimate.  $\,$ 

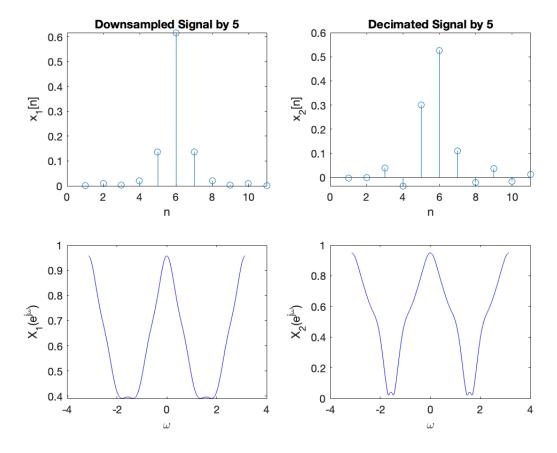


Figure 3: Downsampling by 5

4

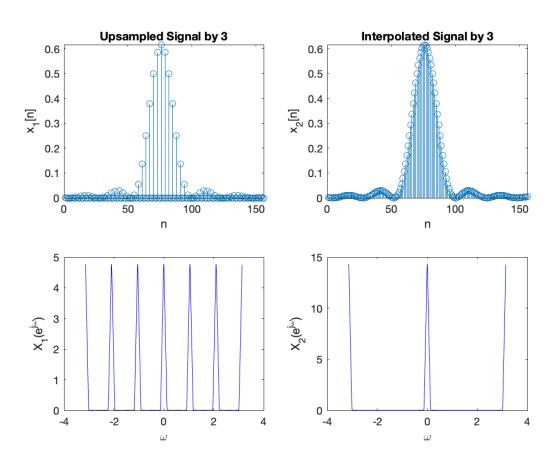


Figure 4: Interpolated by 3

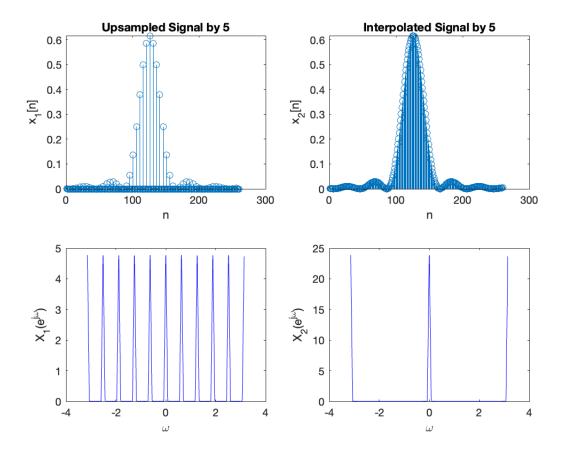


Figure 5: Interpolated by 5

6

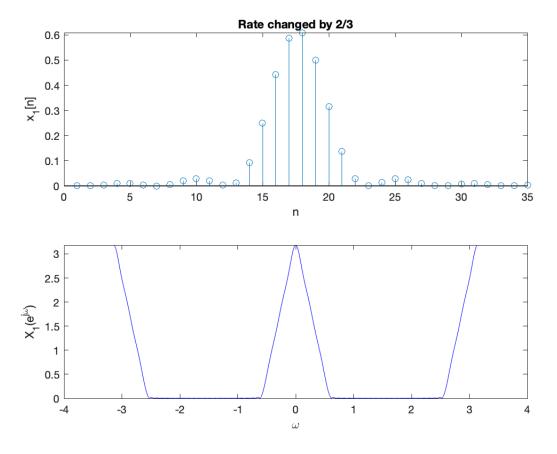


Figure 6: Interpolated by 3

Part 3

