

Half Cycle DFT

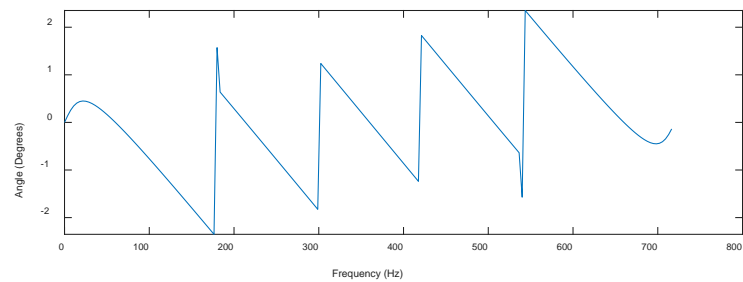
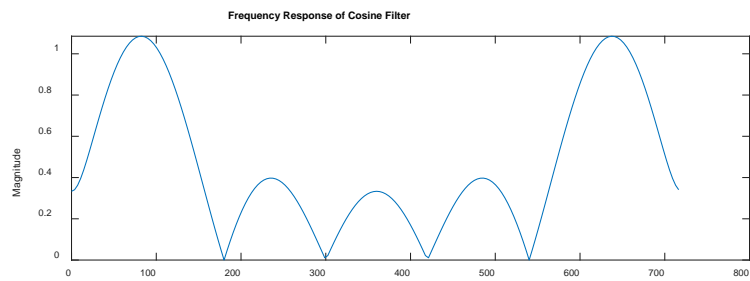
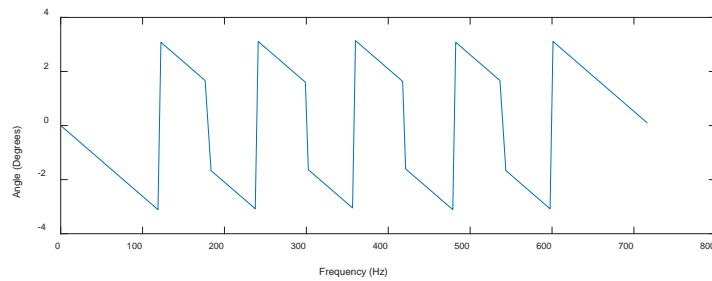
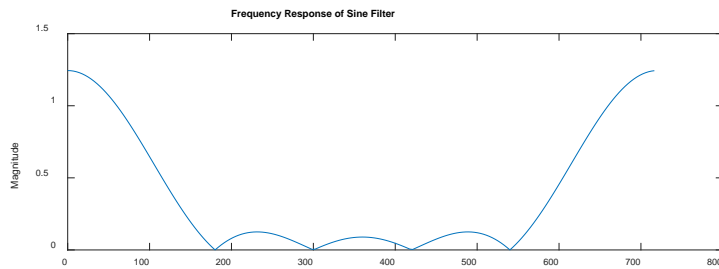
With time reference at zero

Let us say – we would like to take out 60 Hz and a sampling rate of 720 Hz

Ref. sine wave: 0, 0.5, 0.866, 1, 0.866, 0.5

Ref cosine wave: 1, 0.866, 0.5, 0, -0.5, -0.866

Frequency response

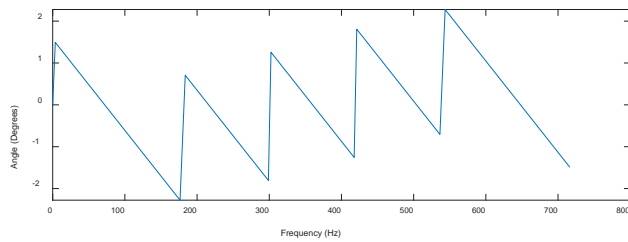
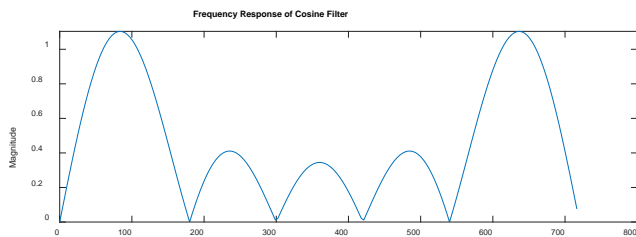
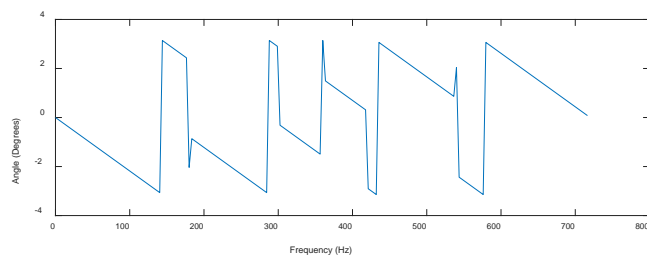
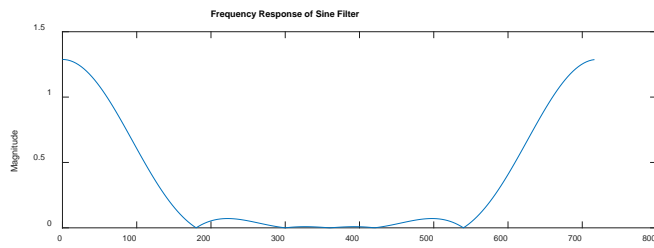


With time reference at Delta T/2

Let us say – we would like to take out 60 Hz and a sampling rate of 720 Hz

Ref. sine wave: 0.2588 0.7071 0.9659 0.9659 0.7071 0.2588

Ref cosine wave: 0.9659 0.7071 0.2588 -0.2588 -0.7071 -0.9659



Half Cycle DFT

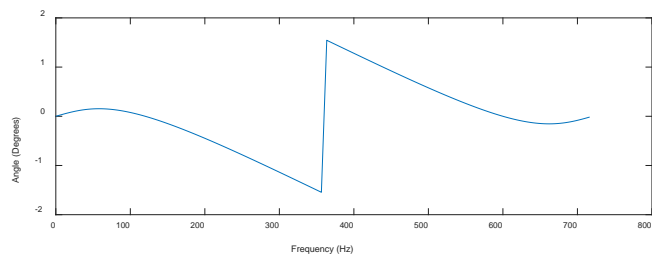
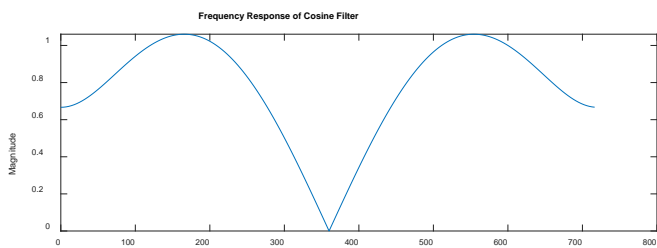
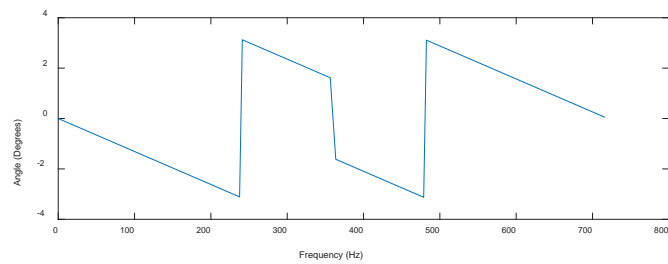
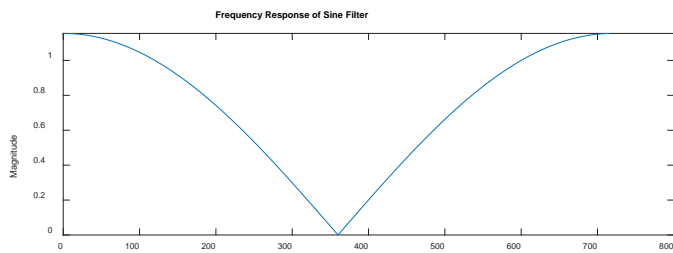
With time reference at zero

Let us say – we would like to take out 120 Hz and a sampling rate of 720 Hz

Ref. sine wave: 0 0.8660 0.8660

Ref cosine wave: 1.0000 0.5000 -0.5000

Frequency response



With time reference at Delta T/2

Let us say – we would like to take out 120 Hz and a sampling rate of 720 Hz

Ref. sine wave: 0.5000 1.0000 0.5000

Ref cosine wave: 0.8660 0.0000 -0.8660

