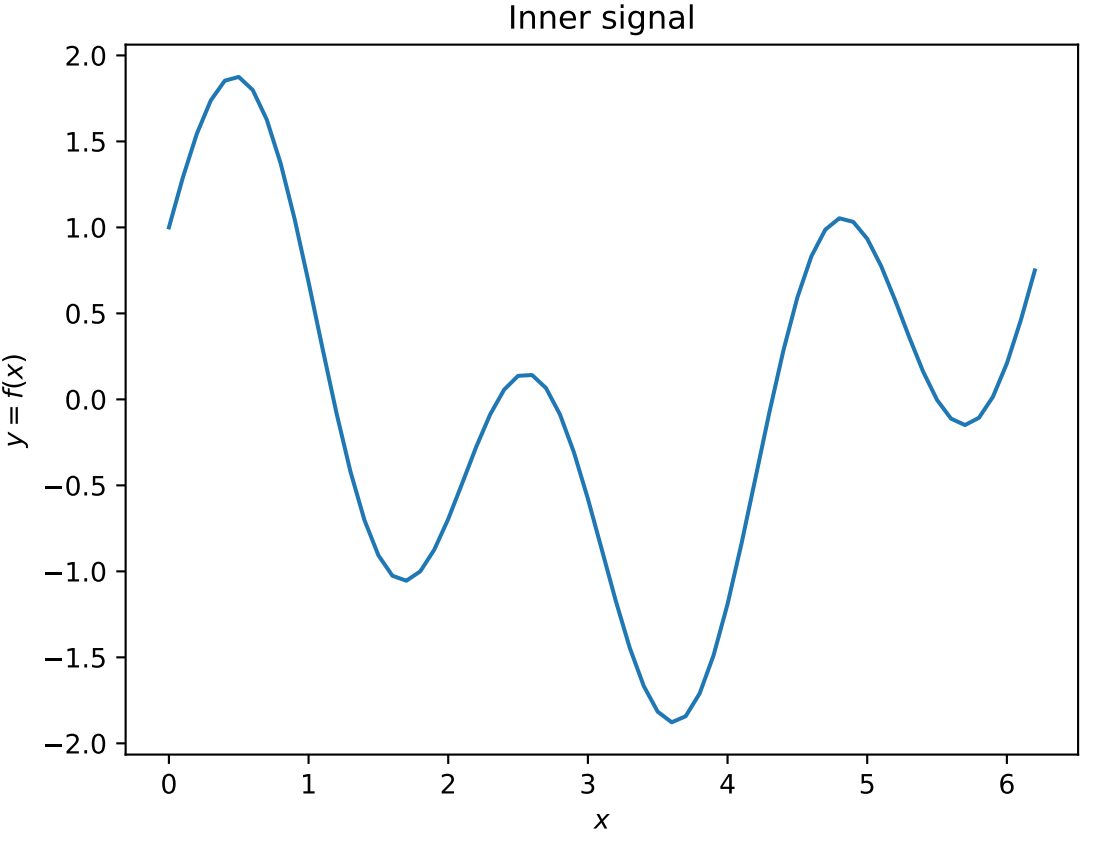
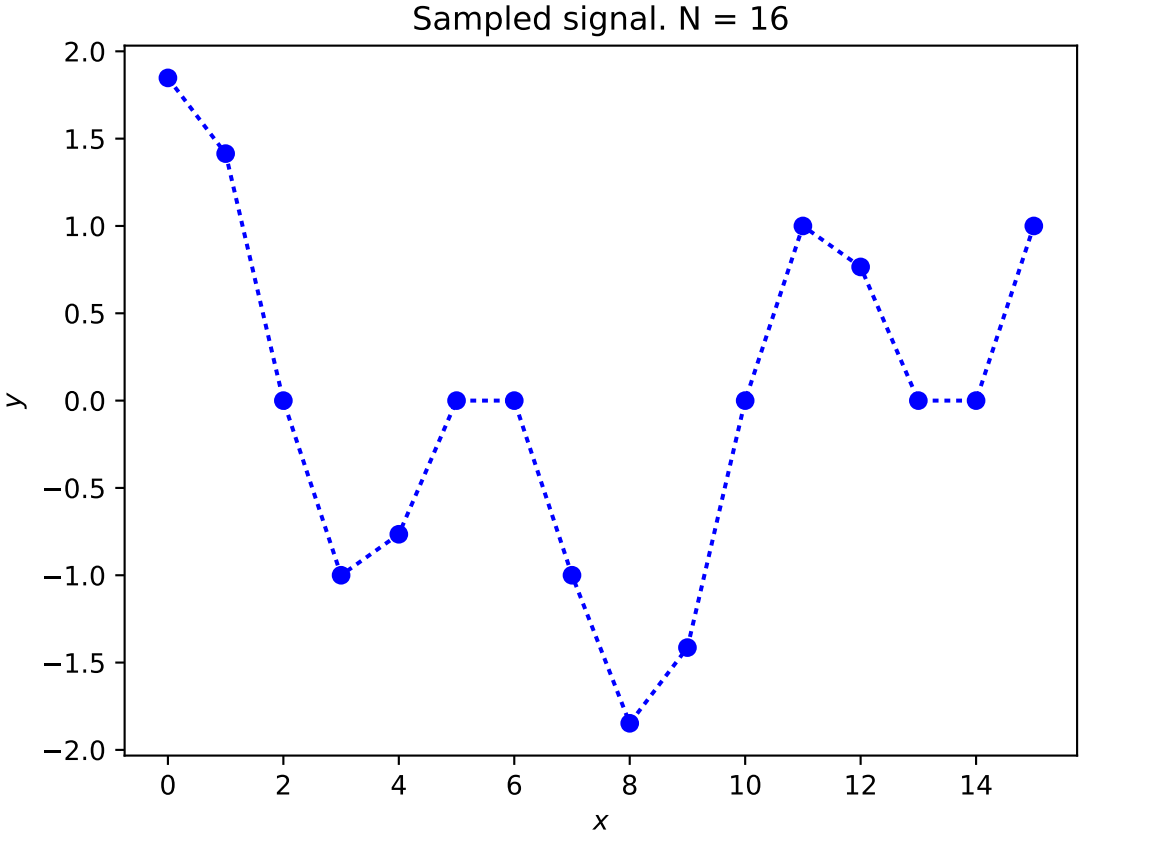
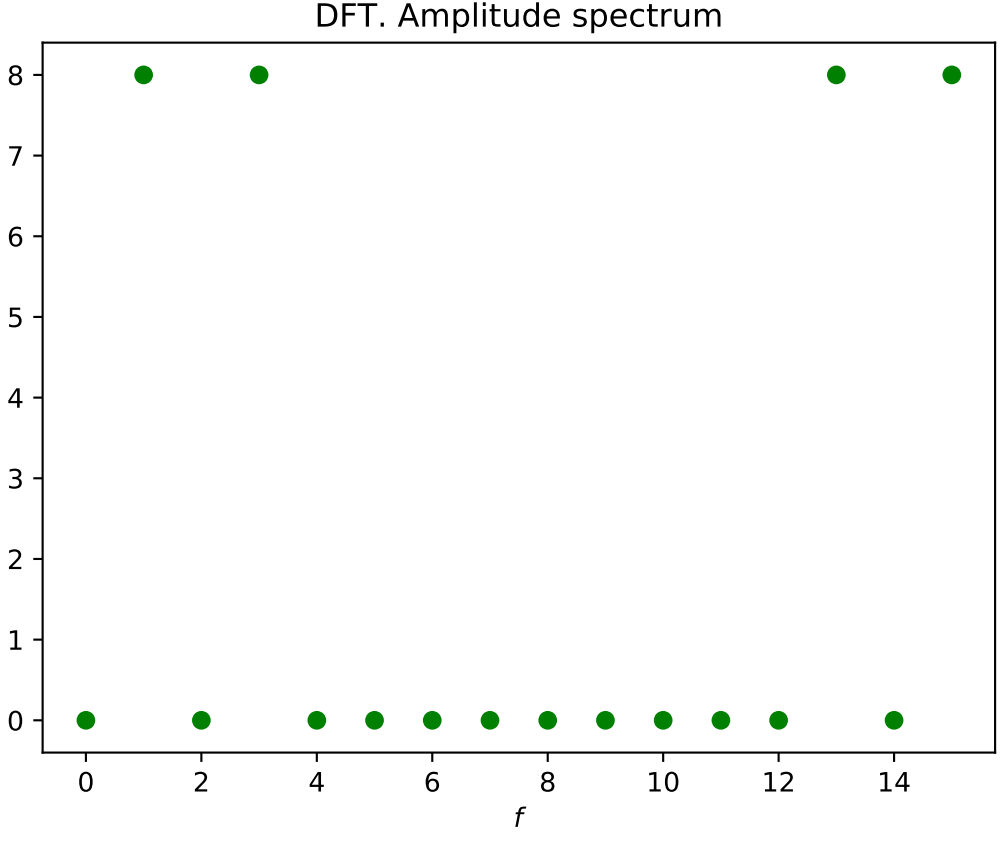
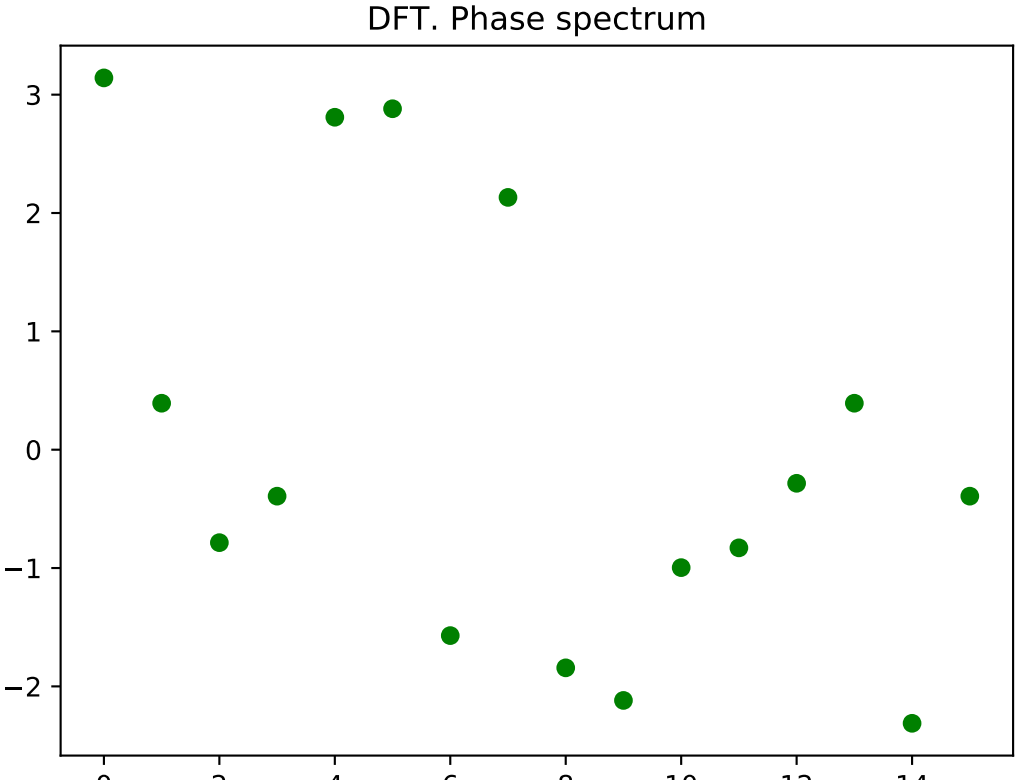
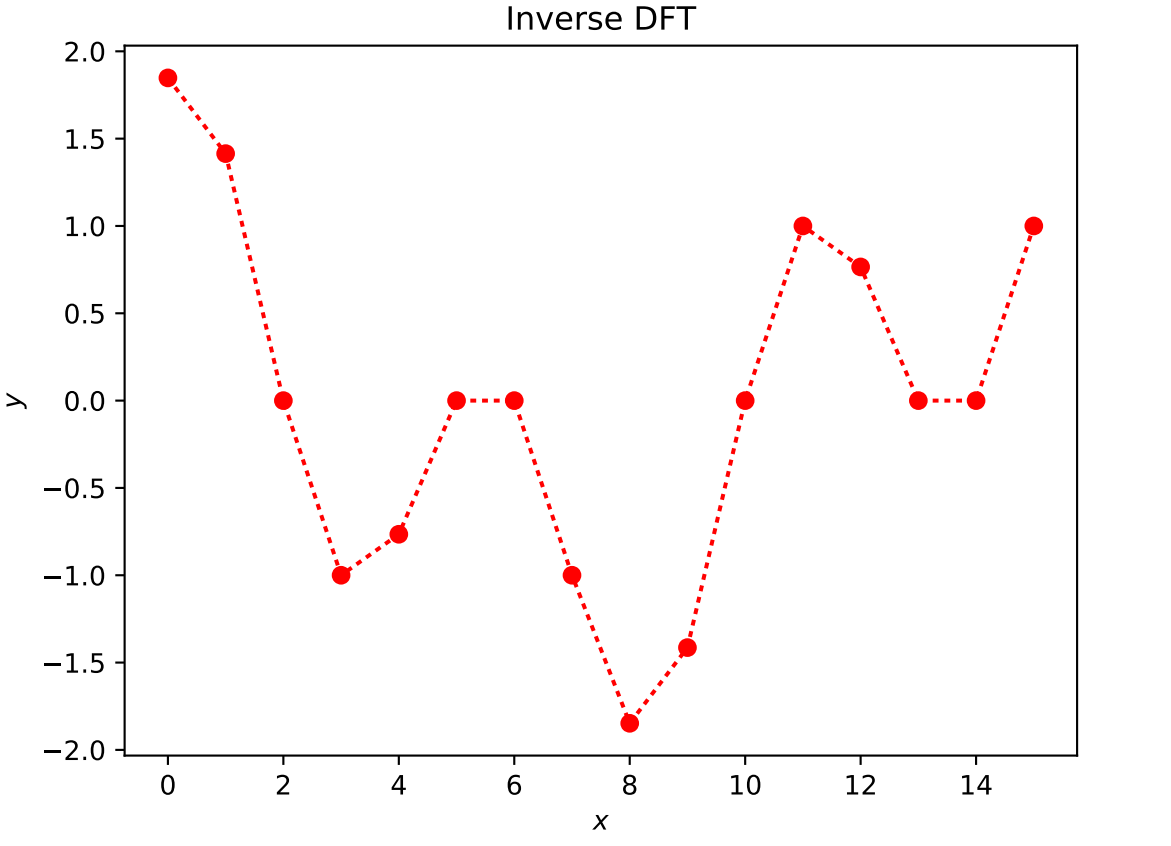
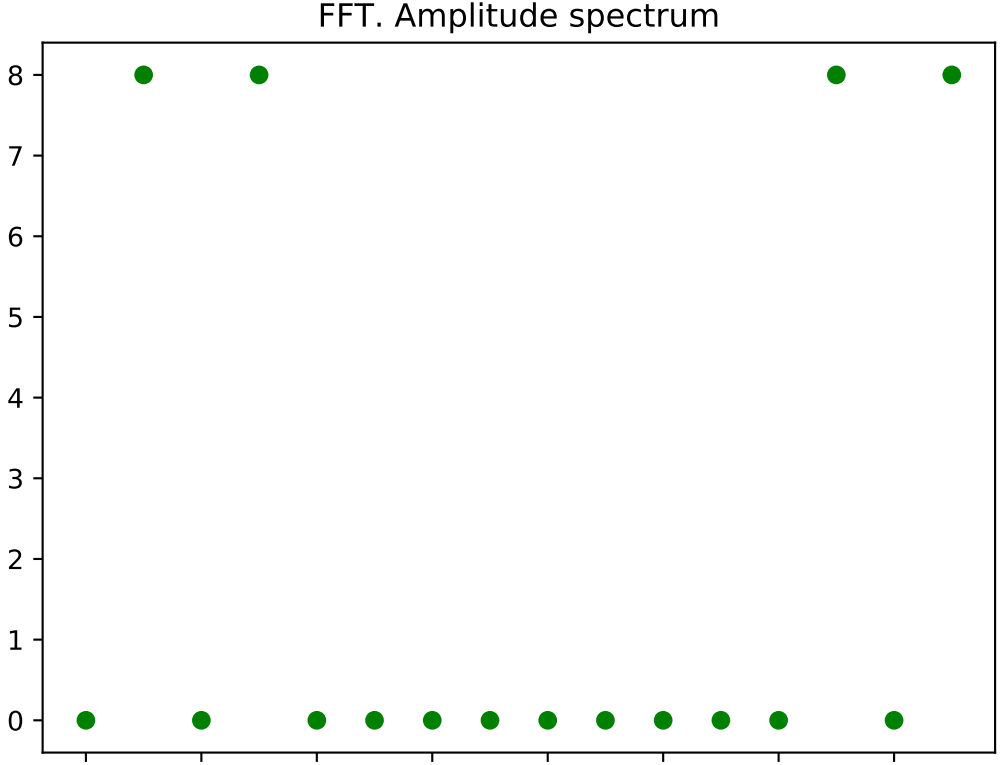

Inner signal
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
$y = f(x)$
0
1
2
3
4
5
6
x

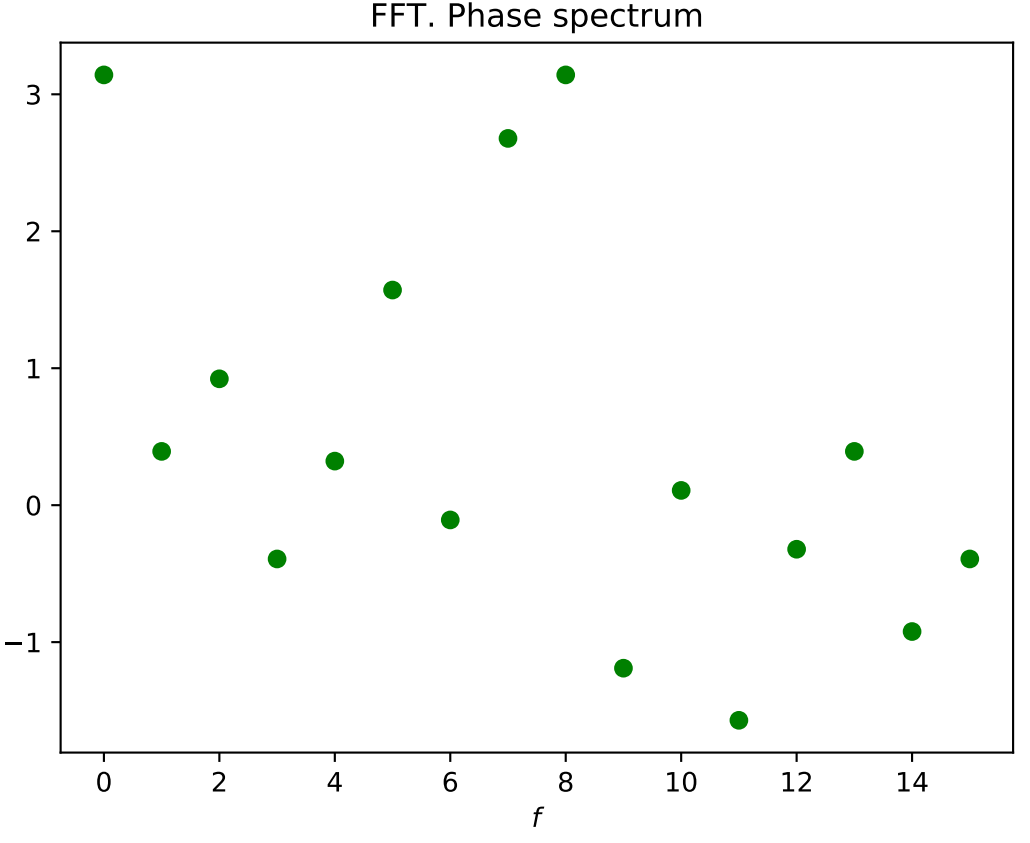

Sampled signal. N = 16
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
y
0
2
4
6
8
10
12
14
x

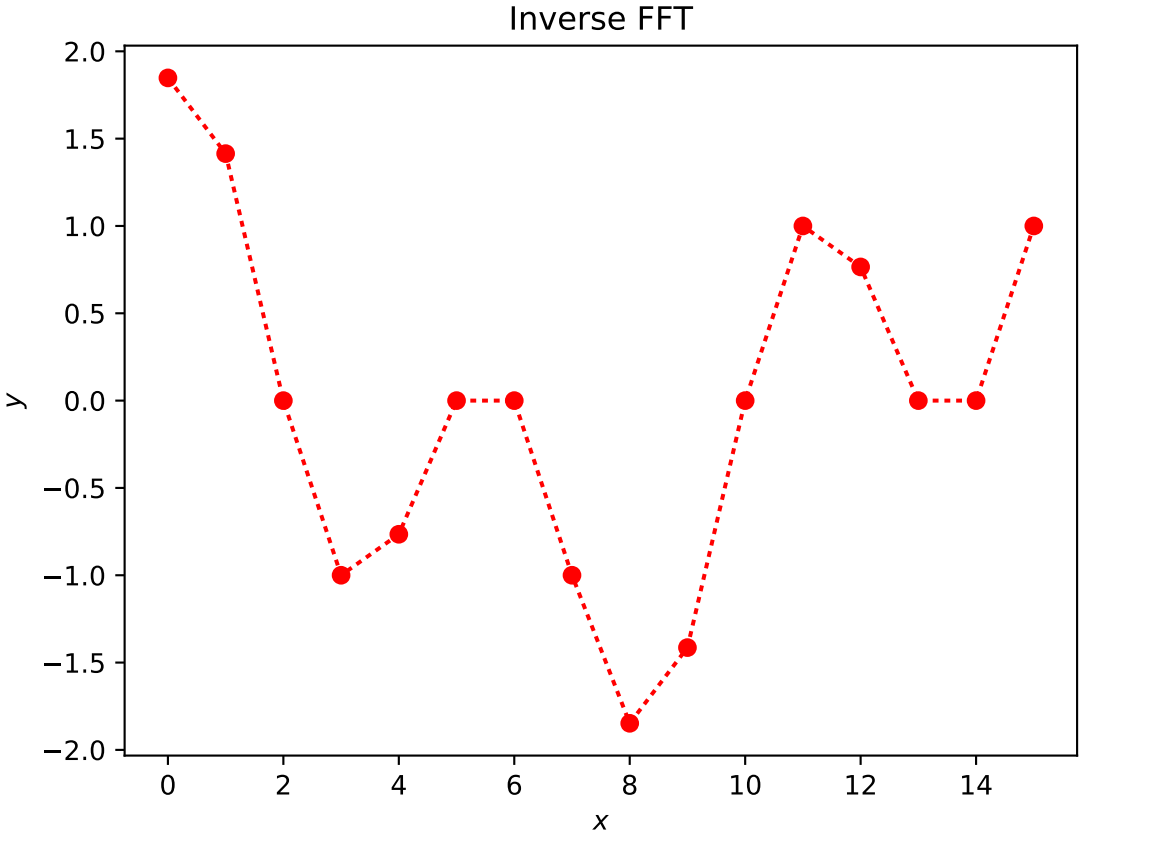

DFT. Amplitude spectrum
8
7
6
5
4
3
2
1
0
0
2
4
6
8
10
12
14
f

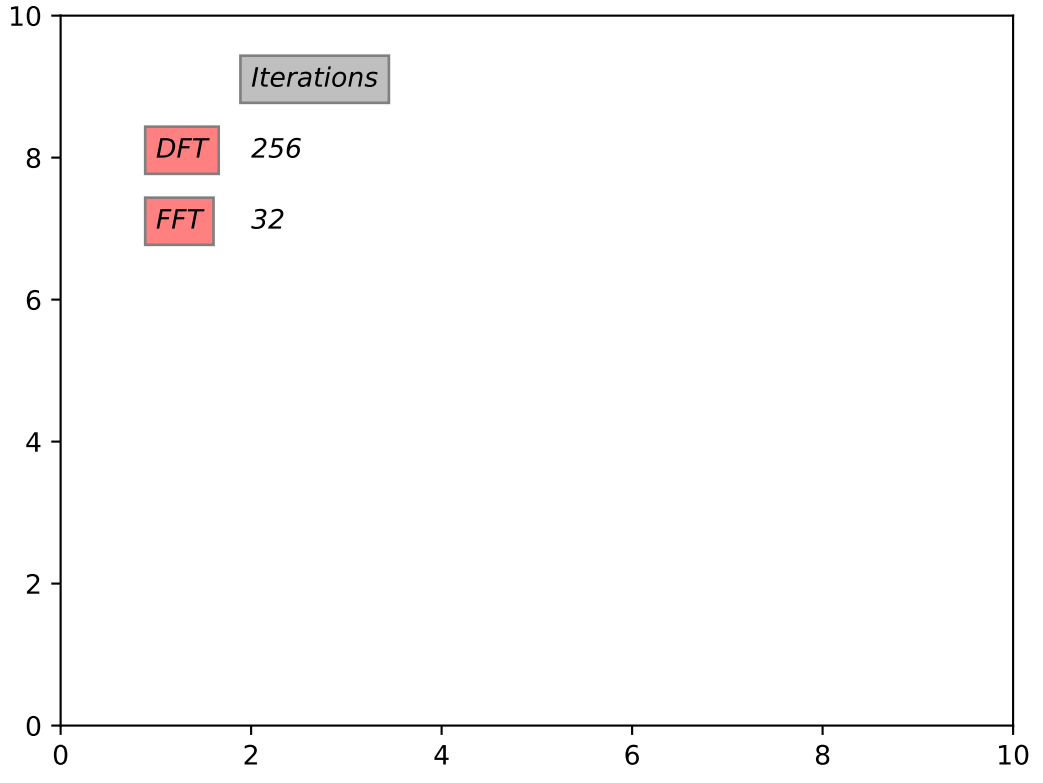

DFT. Phase spectrum
3
2
1
0
−1
−2
0
2
4
6
8
10
12
14


Inverse DFT
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
y
0
2
4
6
8
10
12
14
x


FFT. Amplitude spectrum
8
7
6
5
4
3
2
1
0
0
2
4
6
8
10
12
14


FFT. Phase spectrum
3
2
1
0
−1
0
2
4
6
8
10
12
14
f


Inverse FFT
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
y
0
2
4
6
8
10
12
14
x


Complexity
Iterations
DFT
256
FFT
32
10
8
6
4
2
0
0
2
4
6
8
10