

Figure 1

파일(F) 편집(E) 보기(V) 삽입(I) 툴(T) 데스크탑(D) 창(W) 도움말(H)



편집기 - C:\Users\Walfot\Desktop\WEHAW2학년 2학기\위의용신호처리\assignment4\_1.m

```

1 clear all;
2
3 n20 = 0:19;
4 n40 = 0:39;
5 n60 = 0:59;
6 n120 = 0:119;
7
8 x20 = cos(0.24*pi*n20)+cos(0.3*pi*n20);
9 x40 = cos(0.24*pi*n40)+cos(0.3*pi*n40);
10 x60 = cos(0.24*pi*n60)+cos(0.3*pi*n60);
11 x120 = cos(0.24*pi*n120)+cos(0.3*pi*n120);
12
13 x20_z1024=zeros(1,1024); x20_z1024(1:20)=x20;
14 x40_z1024=zeros(1,1024); x40_z1024(1:40)=x40;
15 x60_z1024=zeros(1,1024); x60_z1024(1:60)=x60;
16 x120_z1024=zeros(1,1024); x120_z1024(1:120)=x120;
17
18 k20 = fftshift(fft(x20));
19 k40 = fftshift(fft(x40));
20 k60 = fftshift(fft(x60));
21 k120 = fftshift(fft(x120));
22

```

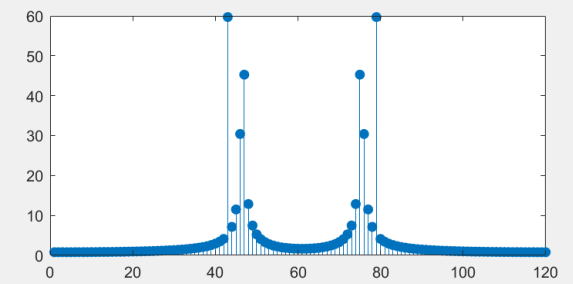
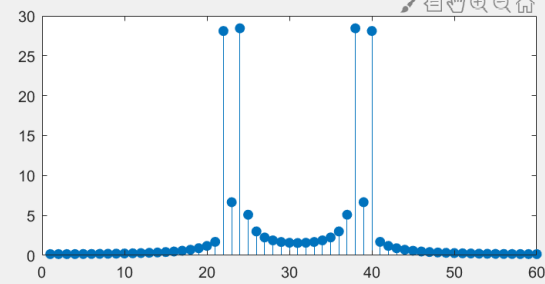
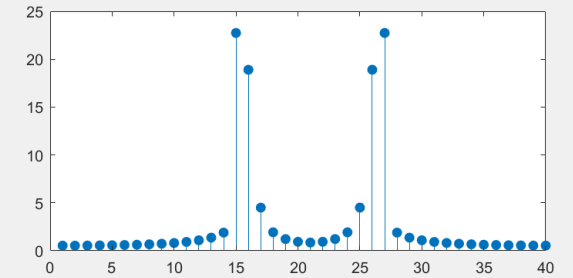
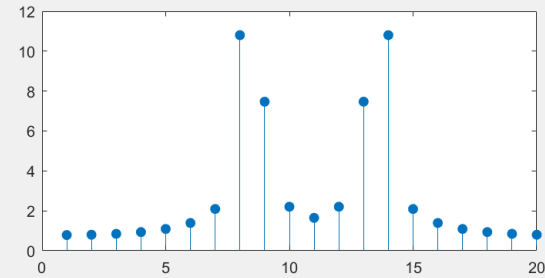


Figure 2

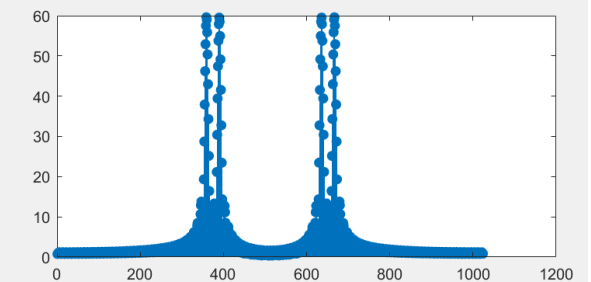
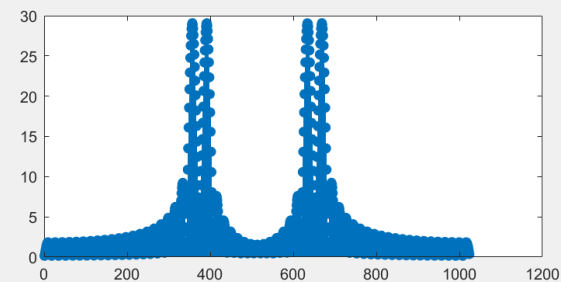
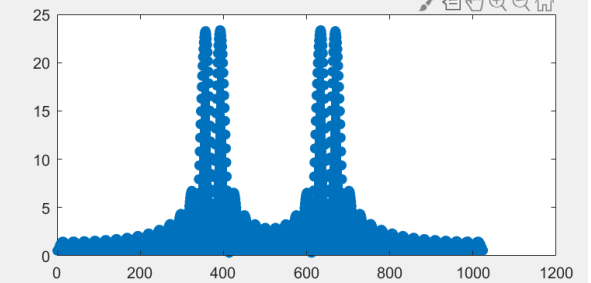
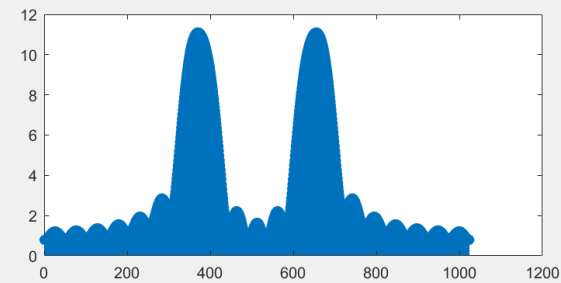
파일(F) 편집(E) 보기(V) 삽입(I) 툴(T) 데스크탑(D) 창(W) 도움말(H)



```

22
23 k20_z1024 = fftshift(fft(x20_z1024));
24 k40_z1024 = fftshift(fft(x40_z1024));
25 k60_z1024 = fftshift(fft(x60_z1024));
26 k120_z1024 = fftshift(fft(x120_z1024));
27
28 figure;
29 subplot(2,2,1); stem(abs(k20),'filled');
30 subplot(2,2,2); stem(abs(k40),'filled');
31 subplot(2,2,3); stem(abs(k60),'filled');
32 subplot(2,2,4); stem(abs(k120),'filled');
33
34 figure;
35 subplot(2,2,1); stem(abs(k20_z1024),'filled');
36 subplot(2,2,2); stem(abs(k40_z1024),'filled');
37 subplot(2,2,3); stem(abs(k60_z1024),'filled');
38 subplot(2,2,4); stem(abs(k120_z1024),'filled');

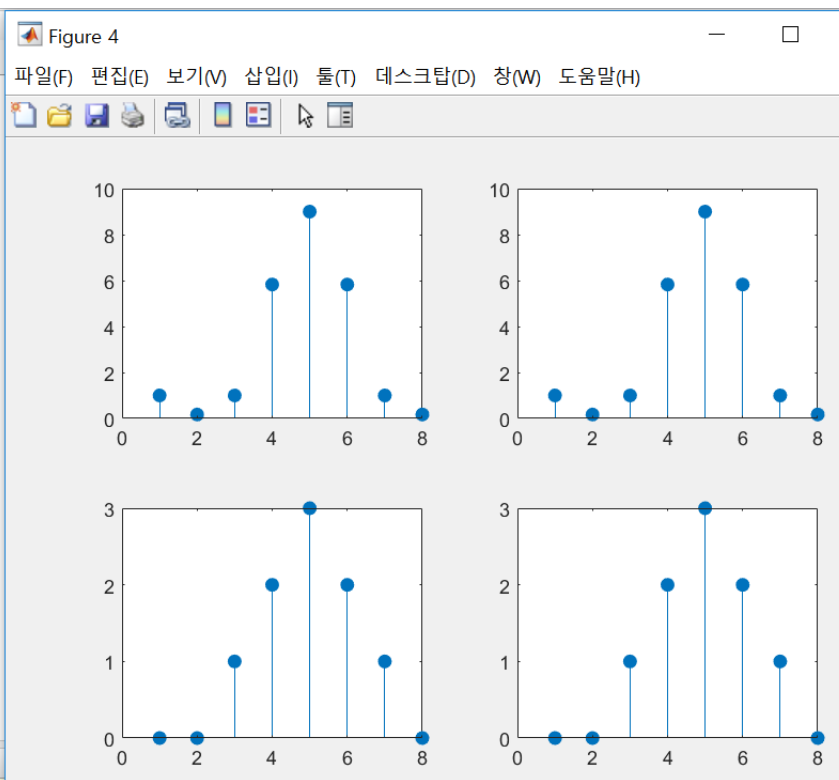
```



```

1 clear all;
2 N = 8;
3
4 n8 = 0:7;
5
6 x8 = [ 0 1 2 3 2 1 0 0 ];
7 x_k8 = fftshift(fft(x8));
8
9 orig_y8 = [ 0 0 1 2 3 2 1 0 ];
10 y8 = circshift(x8,1);
11 y_k8 = fftshift(fft(y8));
12 result_y8 = ifft(y_k8);
13
14 figure;
15 subplot(2,2,1); stem(abs(x_k8), 'filled');
16 subplot(2,2,2); stem(abs(y_k8), 'filled');
17
18 subplot(2,2,3); stem(abs(result_y8), 'filled');
19 subplot(2,2,4); stem(abs(orig_y8), 'filled');
20

```



현재 폴더

이름

assignment3\_5.m  
assignment4\_1.m  
assignment4\_2.m  
assignment4\_4.m  
W.m  
1770119 황서현 의용신...  
1770119 황서현 의용신...  
HW01-의용신호처리-Cor...  
HW02-의용신호처리.pdf  
Sol-HW01-의용신호처리...  
Sol-HW02-의용신호처리...  
과제3-4 Imag val.PNG  
과제3-4 real val.PNG

assignment4\_4.m (스크립트)

이름

값

angle\_b13 4x4 double  
angle\_b22 4x4 double  
b13 4x4 double  
b22 4x4 complex ...  
imag\_b13 4x4 double  
imag\_b22 4x4 double  
k13 4x4 double  
k22 4x4 double  
real\_b13 4x4 double

편집기 - C:\Users\Walfot\Desktop\WEWHAW2학년 2학기\의용신호처리\Wassignment4\_2.m

assignment4\_1.m assignment4\_2.m assignment4\_4.m +

```

1 clear all;
2
3 k13 = zeros(4,4);
4 k13(1,3) = 1;
5 b13 = 16*ifft2(fftshift(k13));
6 real_b13 = real(b13);
7 imag_b13 = imag(b13);
8 angle_b13 = angle(b13)/pi;
9
10 k22 = zeros(4,4);
11 k22(2,2) = 1;
12 b22 = 16*ifft2(fftshift(k22));
13 real_b22 = real(b22);
14 imag_b22 = imag(b22);
15 angle_b22 = angle(b22)/pi;
16
17
18
19
20

```

명령 창

MATLAB을 처음 사용하다면 시작하기를 참조하십시오

변수 - b13

플... 변... 보...

b13

4x4 double

	1	2	3	4
1	1	1	1	1
2	-1	-1	-1	-1
3	1	1	1	1
4	-1	-1	-1	-1

b22

4x4 complex double

	1	2	3	4
1	1.0000 + 0.0000i	0.0000 - 1.0000i	-1.0000 + 0.0000i	0.0000 + 1.0000i
2	0.0000 - 1.0000i	-1.0000 + 0.0000i	0.0000 + 1.0000i	1.0000 + 0.0000i
3	-1.0000 + 0.0000i	0.0000 + 1.0000i	1.0000 + 0.0000i	0.0000 - 1.0000i
4	0.0000 + 1.0000i	1.0000 + 0.0000i	0.0000 - 1.0000i	-1.0000 + 0.0000i