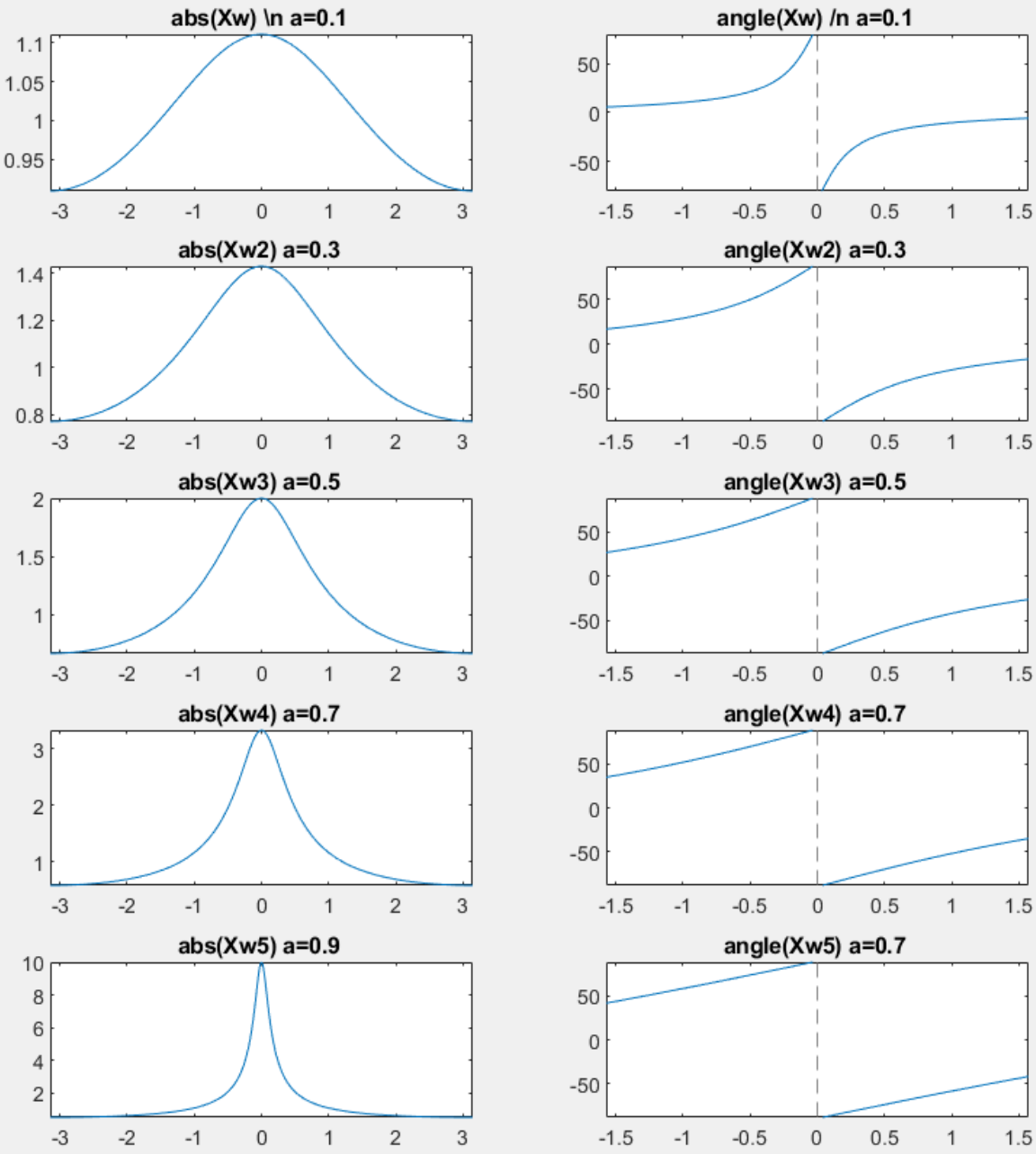
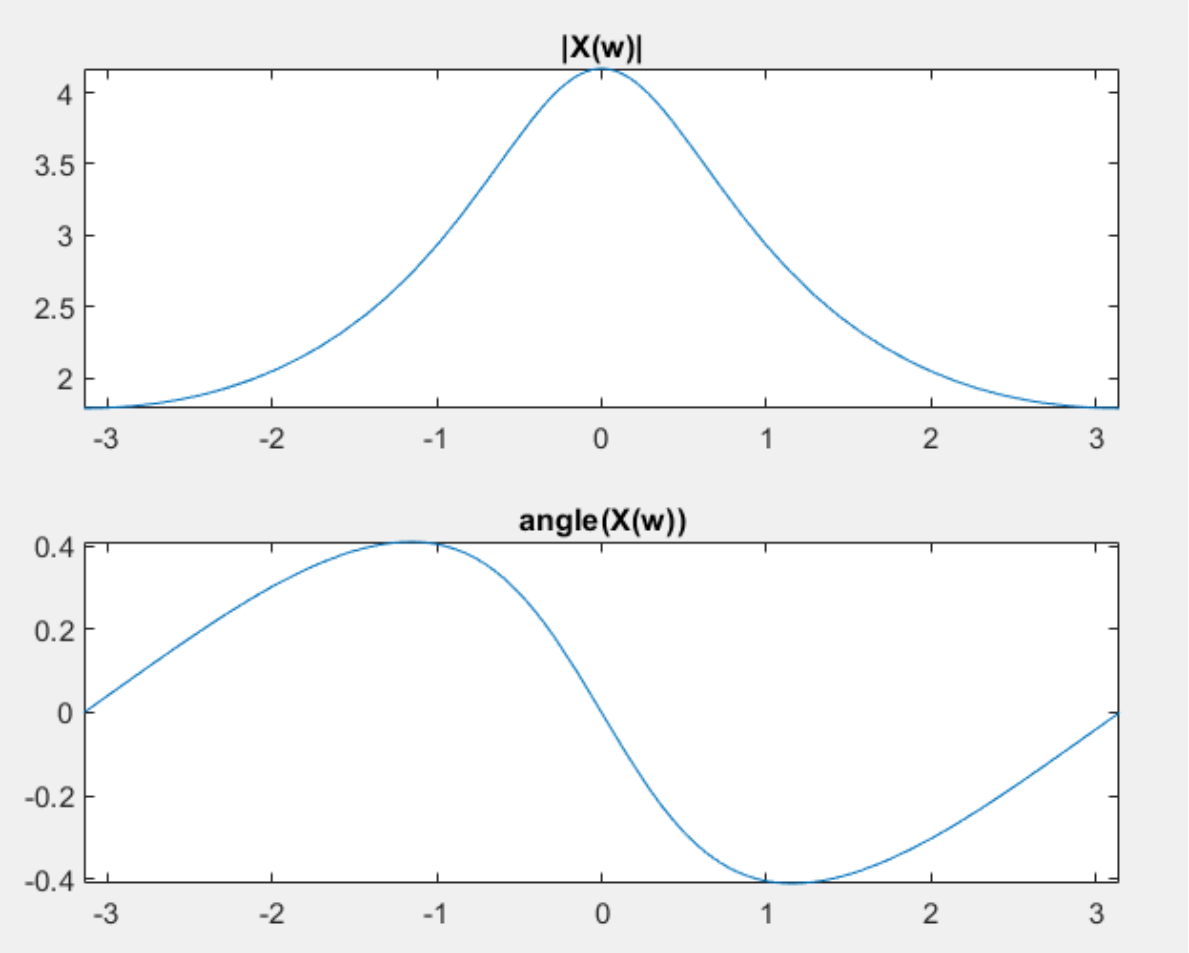
DSPOdev1.m | DSPOdev2.m | DSPOdev3.m

```
clc;
clear all;
close all;

syms w ;
a = 0.1 ;
a2 = 0.3 ;
a3 = 0.5 ;
a4 = 0.7 ;
a5 = 0.9 ;

ABSXw = 1/((1+a^2 -2*a*cos(w))^(1/2)) ;
ANGXw = atand((-a*sin(w))/(1-cos(w))) ;

ABSXw2 = 1/((1+a2^2 -2*a2*cos(w))^(1/2)) ;
ANGXw2 = atand((-a2*sin(w))/(1-cos(w))) ;

ABSXw3 = 1/((1+a3^2 -2*a3*cos(w))^(1/2)) ;
ANGXw3 = atand((-a3*sin(w))/(1-cos(w))) ;

ABSXw4 = 1/((1+a4^2 -2*a4*cos(w))^(1/2)) ;
ANGXw4 = atand((-a4*sin(w))/(1-cos(w))) ;

ABSXw5 = 1/((1+a5^2 -2*a5*cos(w))^(1/2)) ;
ANGXw5 = atand((-a5*sin(w))/(1-cos(w))) ;

subplot(5,2,1)
fplot(ABSXw,[-pi pi]);
title('abs(Xw) \n a=0.1 ');

subplot(5,2,2)
fplot(ANGXw,[-pi/2 pi/2]);
title('angle(Xw) /n a=0.1 ');

subplot(5,2,3)
fplot(ABSXw2,[-pi pi]);
title('abs(Xw2) a=0.3 ');

subplot(5,2,4)
fplot(ANGXw2,[-pi/2 pi/2]);
title('angle(Xw2) a=0.3 ');

subplot(5,2,5)
fplot(ABSXw3,[-pi pi]);
title('abs(Xw3) a=0.5 ');

subplot(5,2,6)
fplot(ANGXw3,[-pi/2 pi/2]);
title('angle(Xw3) a=0.5 ');

subplot(5,2,7)
fplot(ABSXw4,[-pi pi]);
title('abs(Xw4) a=0.7 ');

subplot(5,2,8)
fplot(ANGXw4,[-pi/2 pi/2]);
title('angle(Xw4) a=0.7 ');

subplot(5,2,9)
fplot(ABSXw5,[-pi pi]);
title('abs(Xw5) a=0.9 ');

subplot(5,2,10)
fplot(ANGXw5,[-pi/2 pi/2]);
title('angle(Xw5) a=0.7 ');
```


abs(Xw) \n a=0.1
angle(Xw) /n a=0.1
abs(Xw2) a=0.3
angle(Xw2) a=0.3
abs(Xw3) a=0.5
angle(Xw3) a=0.5
abs(Xw4) a=0.7
angle(Xw4) a=0.7
abs(Xw5) a=0.9
angle(Xw5) a=0.7

Ödev 2

```
67 -    Xw = (((0.2)^4)*exp(-1j*4*w))/(1-(0.2)*exp(-1j*w)) + (2.5)/(1-0.4*exp(-1j*w)) ;
68
69 -    subplot(2,1,1)
70 -    fplot(abs(Xw),[-pi pi]);
71 -    title('|X(w)|');
72
73 -    subplot(2,1,2)
74 -    fplot(angle(Xw),[-pi pi]);
75 -    title('angle(X(w))');
```



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