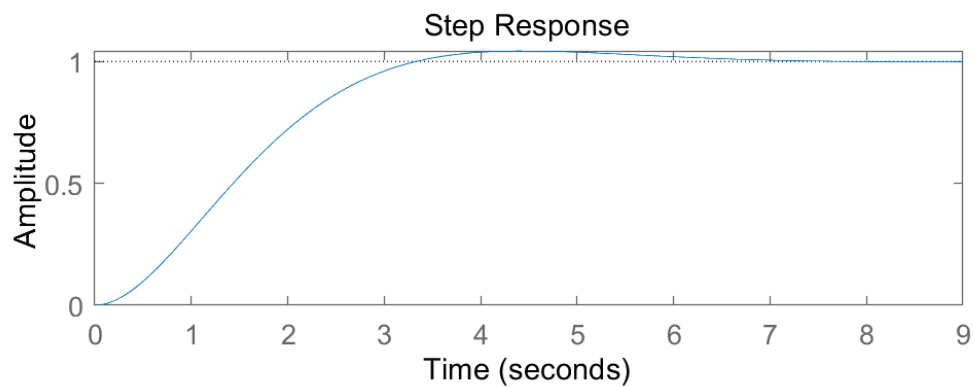
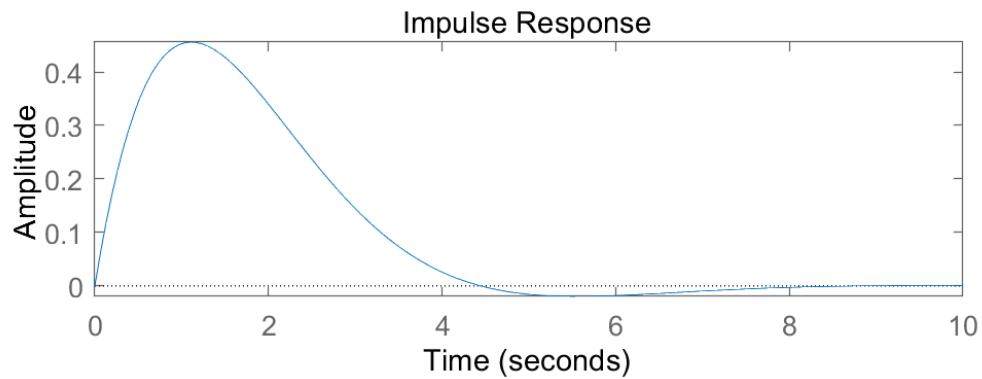


%1120183157 韩槟阳 05022011 睿信2041

%2022-05-09 实验二

%1-1

```
b=[1]
a=[1 sqrt(2) 1]
sys=tf(b,a)
subplot(211)
impz(sys)
subplot(212)
step(sys)
```



```
%1-2
```

```
b=[1 0 0]
```

```
a=[1 sqrt(2) 1]
```

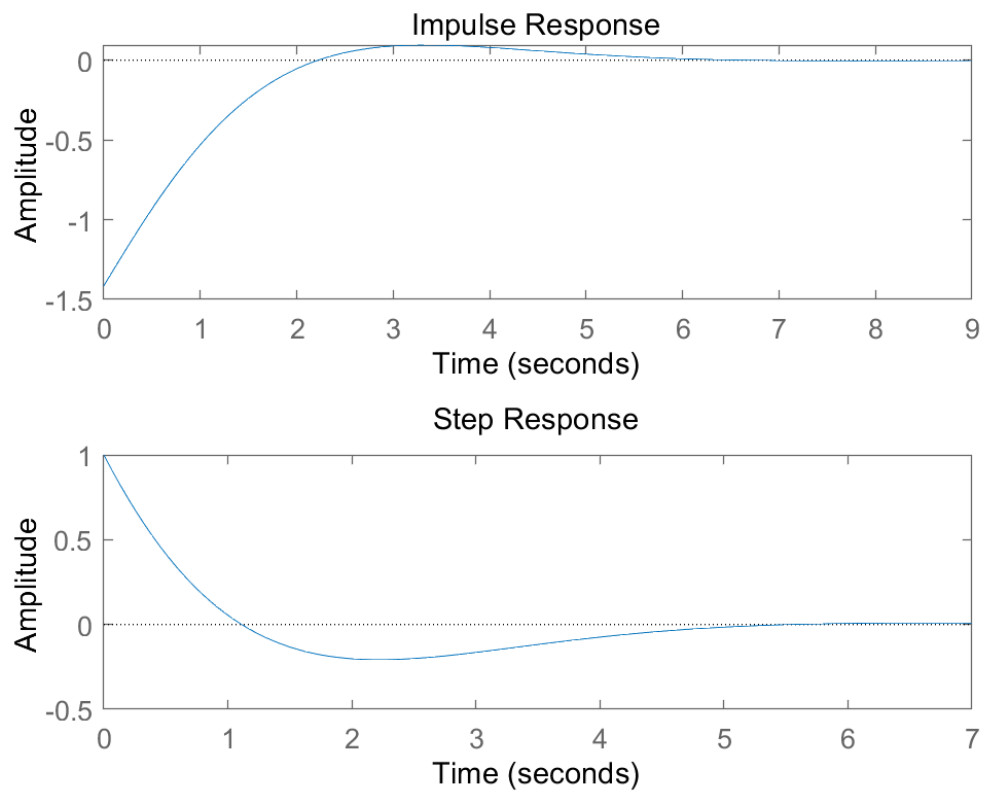
```
sys=tf(b,a)
```

```
subplot(211)
```

```
impz(sys)
```

```
subplot(212)
```

```
step(sys)
```



```
%1-3
```

```
b=[1 0]
```

```
a=[1 1 1]
```

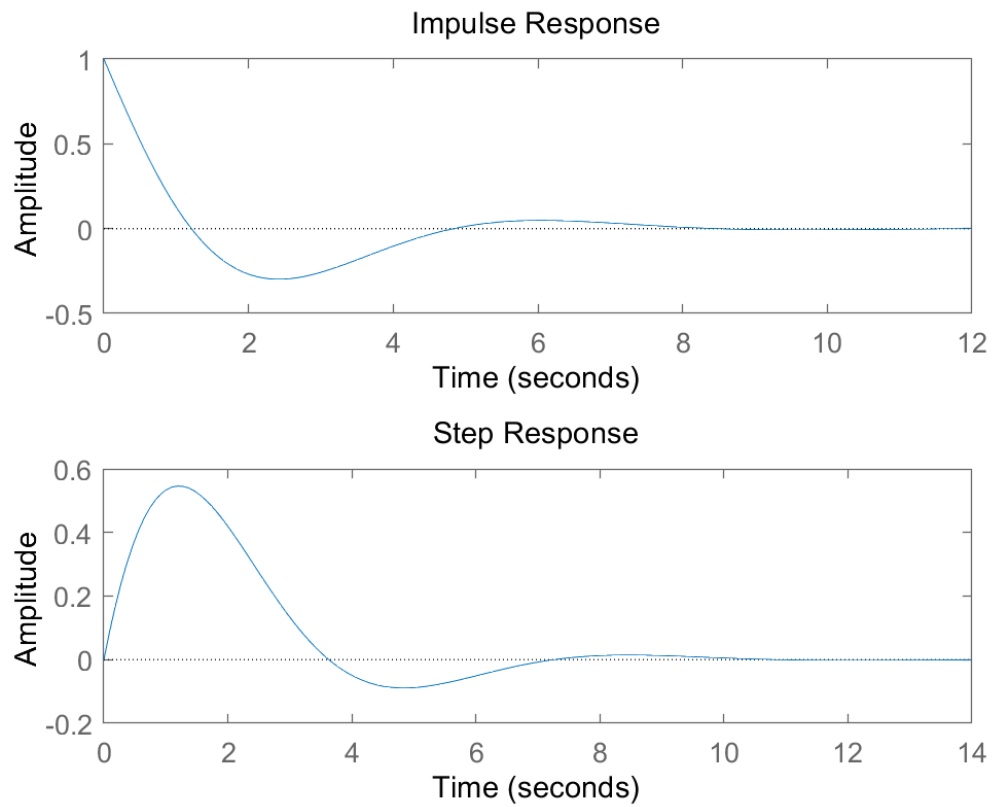
```
sys=tf(b,a)
```

```
subplot(211)
```

```
impz(sys)
```

```
subplot(212)
```

```
step(sys)
```



```
%1-4
```

```
b=[1 0 1]
```

```
a=[1 1 1]
```

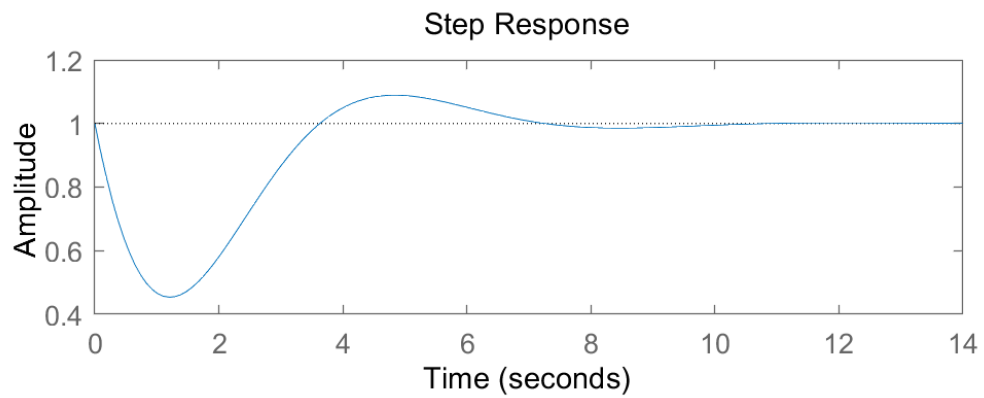
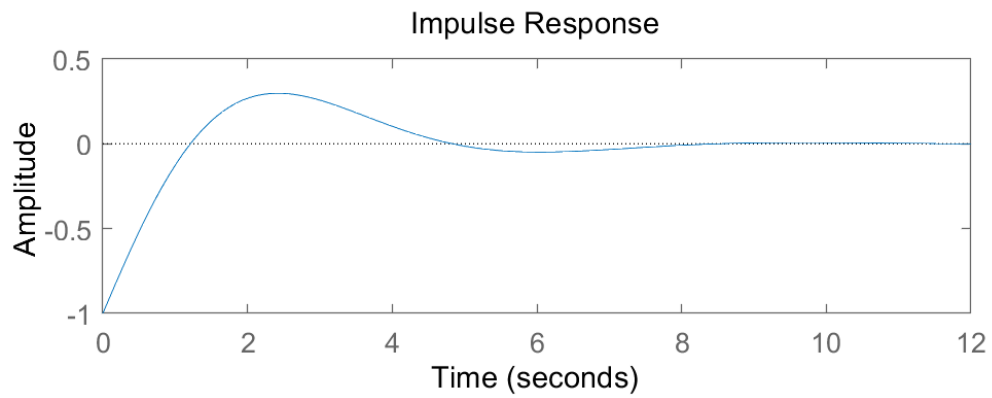
```
sys=tf(b,a)
```

```
subplot(211)
```

```
impz(sys)
```

```
subplot(212)
```

```
step(sys)
```



```
%2
```

```
b=[1]
```

```
a=[1 1 6]
```

```
sys=tf(b,a)
```

```
subplot(311)
```

```
impz(sys)
```

```
subplot(312)
```

```
step(sys)
```

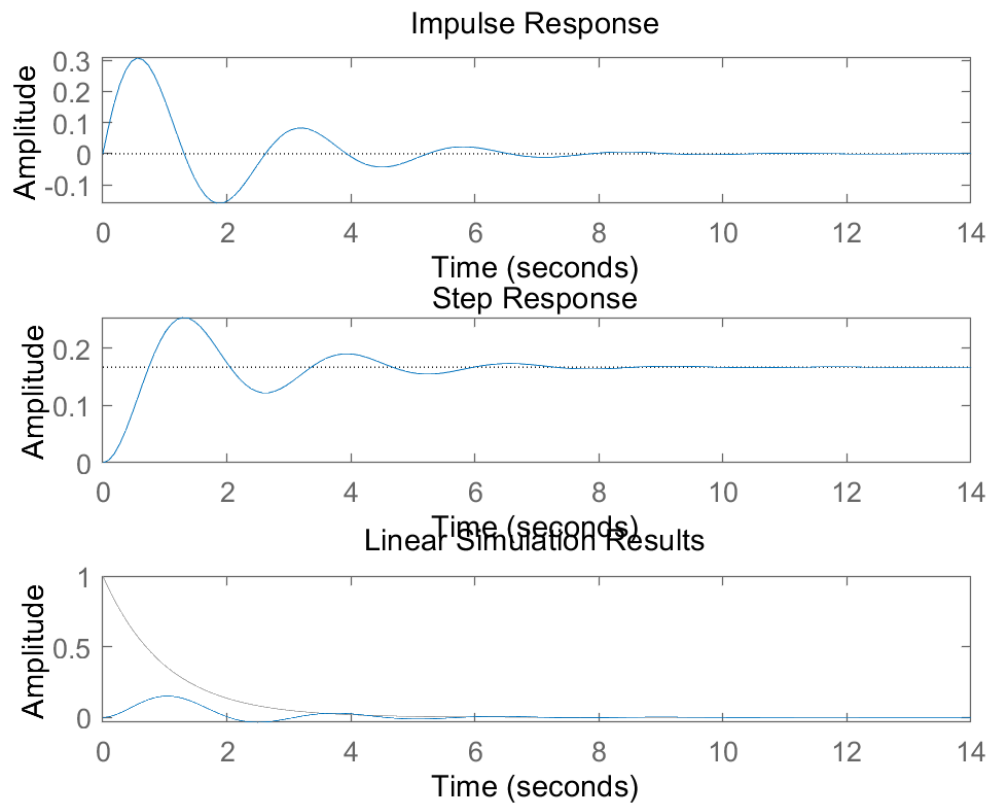
```
subplot(313)
```

```
t=0:0.01:14
```

```
x=exp(-t)
```

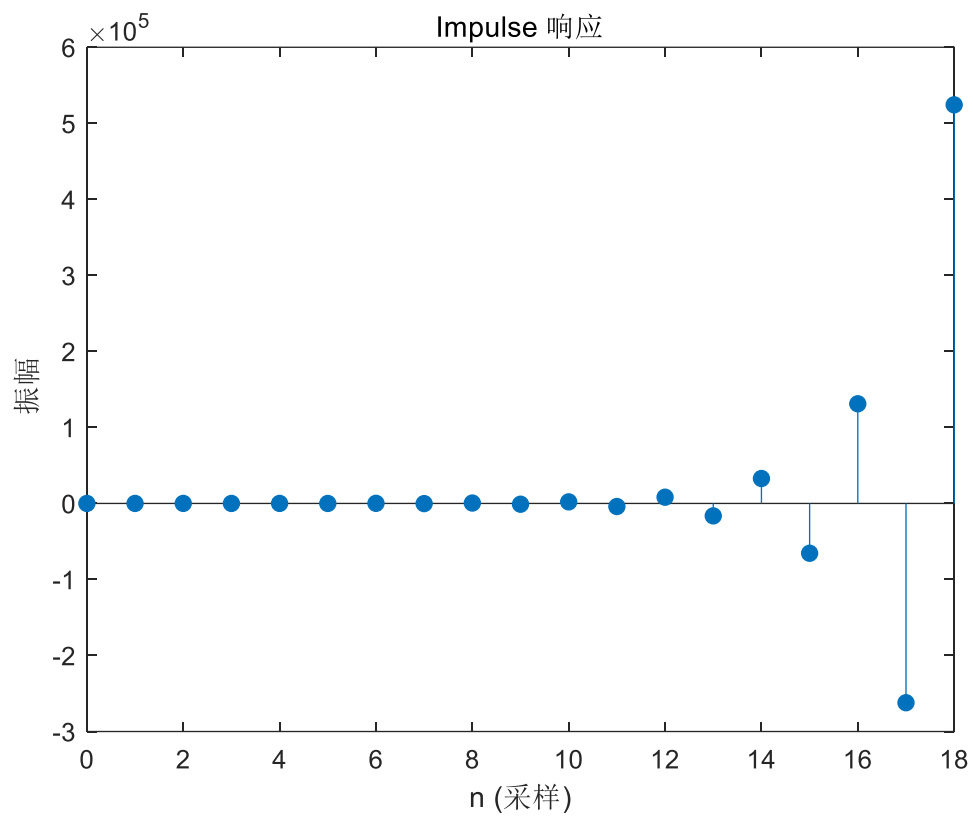
```
lsim(sys,x,t)
```

系统是稳定的



```
%3-1  
b=[1]  
a=[1 3 2]  
impz(b,a)
```

系统是不稳定的



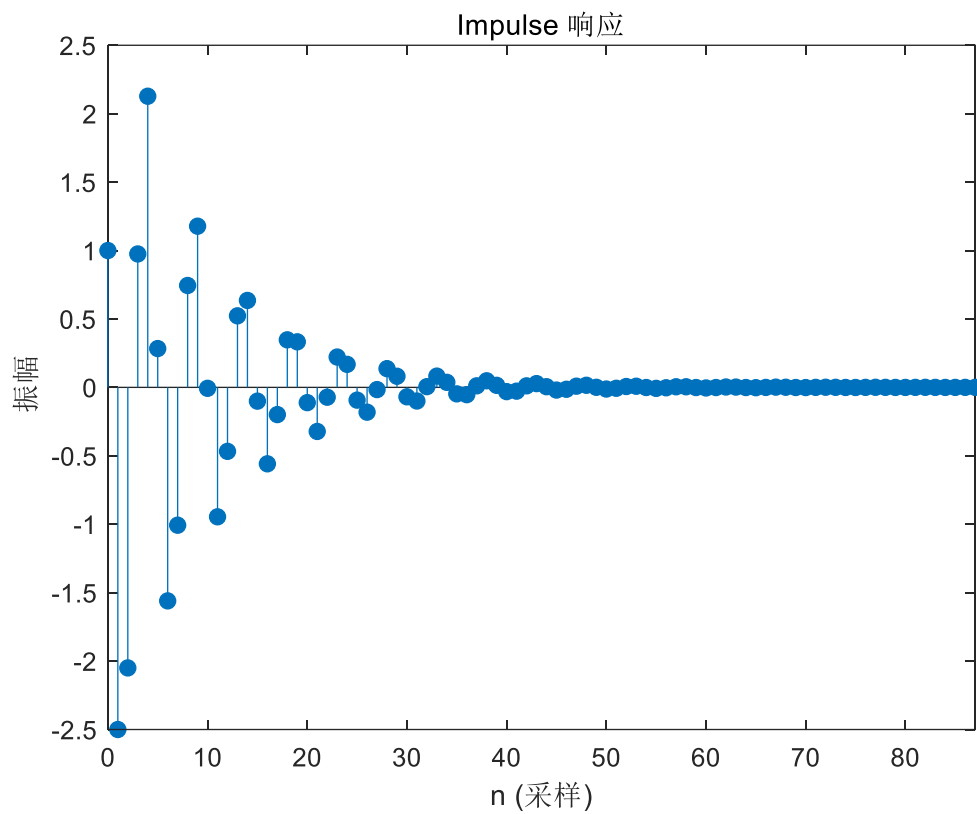
%3-2

```
b=[1 -3]
```

```
a=[1 -0.5 0.8]
```

```
impz(b,a)
```

系统是稳定的



```
%4
```

```
b=[1]
```

```
a=[1 1 0.25]
```

```
subplot(211)
```

```
impz(b,a)
```

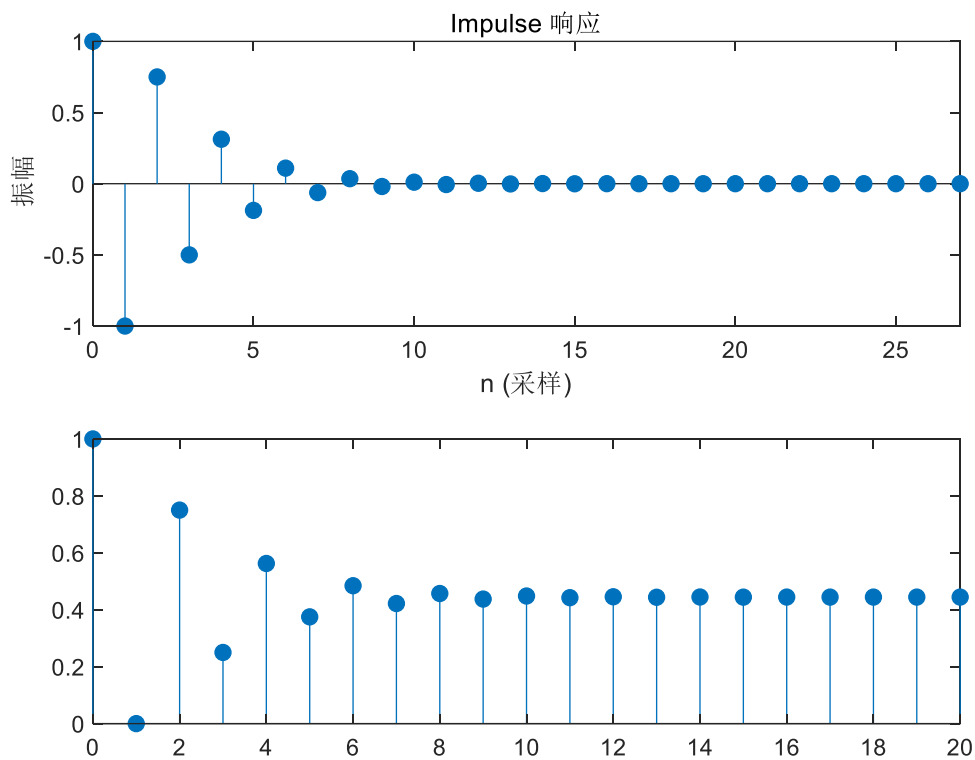
```
subplot(212)
```

```
n=0:20
```

```
x=1.^n
```

```
y=filter(b,a,x)
```

```
stem(n,y,'filled')
```




```
%5
```

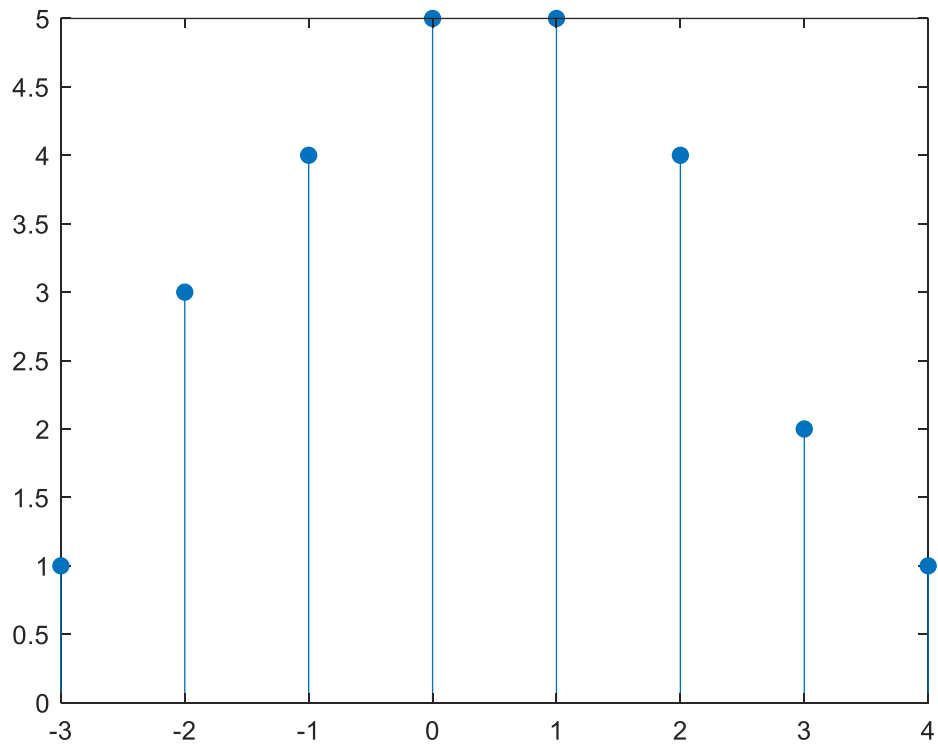
```
a=[1 2 1 1]
```

```
b=[1 1 1 1 1]
```

```
c=conv(a,b)
```

```
n=-3:4
```

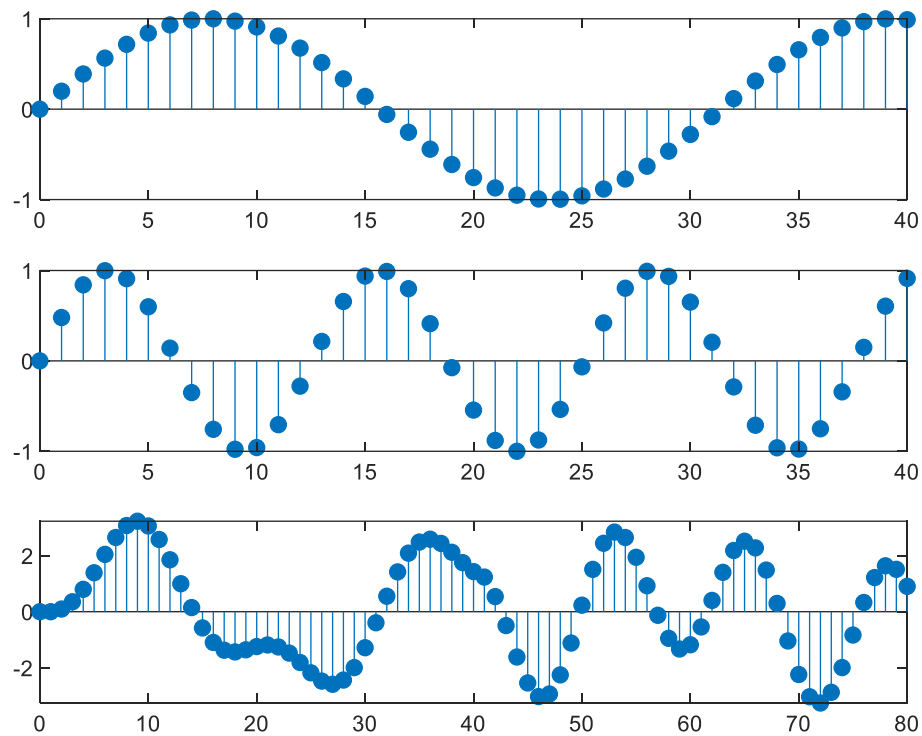
```
stem(n,c,'filled')
```



```

%6
n=0:40
x=sin(0.2*n)
subplot(311)
stem(n,x,'filled')
subplot(312)
h=sin(0.5*n)
stem(n,h,'filled')
y=conv(x,h)
subplot(313)
stem(0:80,y,'filled')

```



```
%7
t1=-1:0.01:1
x1=2*(heaviside(t1+1)-heaviside(t1-1))
t2=-2:0.01:2
x2=heaviside(t2+2)-heaviside(t2-2)
y=conv(x1,x2)
t=-3:0.01:3
plot(t,y)
```

