

سوالات متلب تمرین سری چهارم

زهرا ایرانپور مبارکه

۹۸۱۹۸۹۳

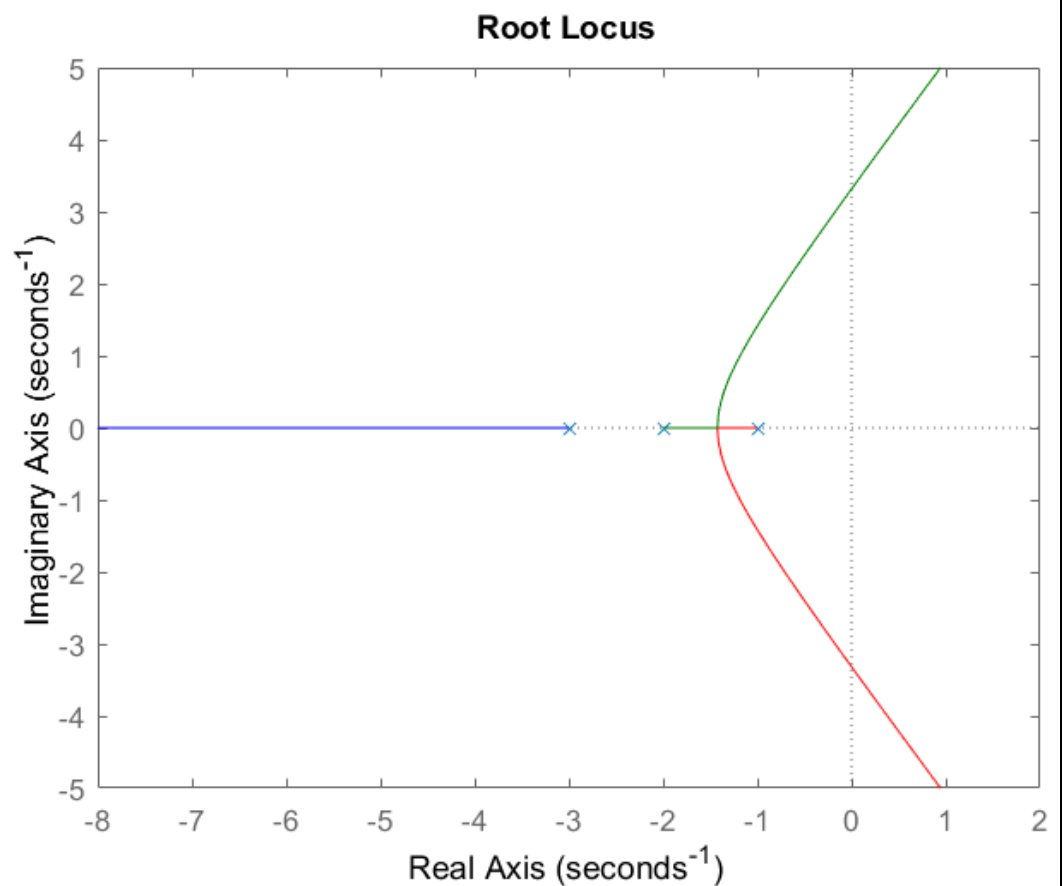
سوال ۱:

```
clc  
clear  
clear all
```

```
syms k s
```

(الف)

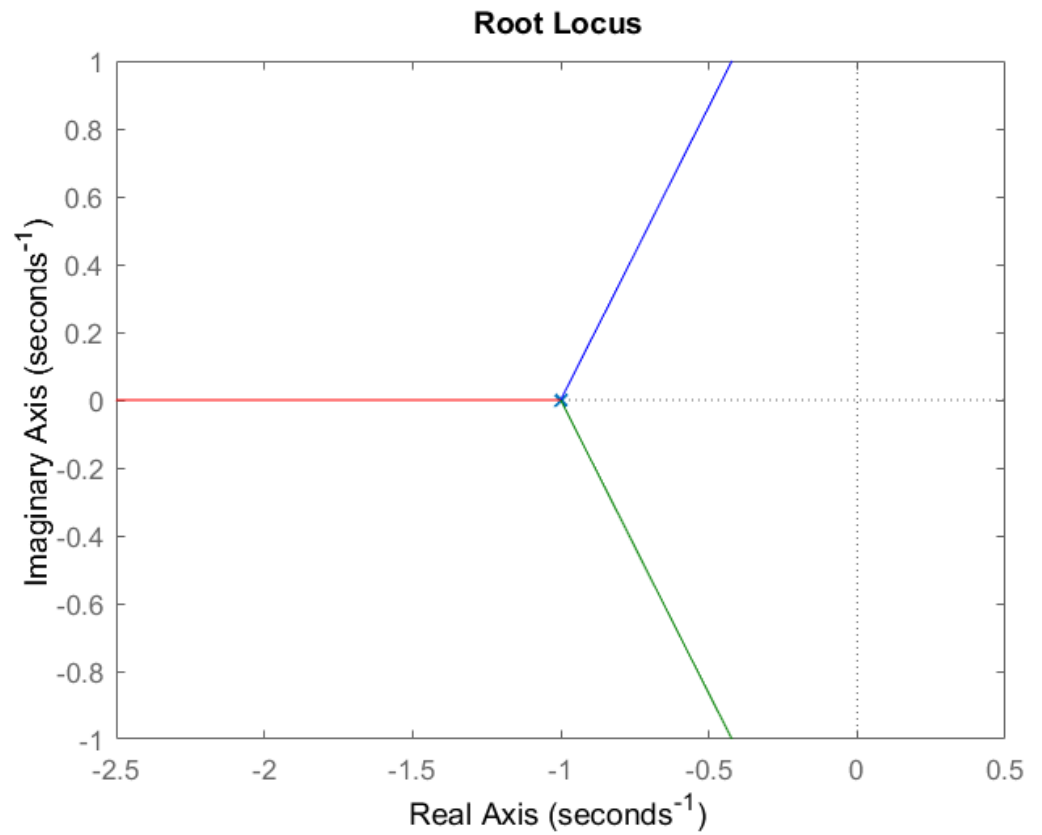
```
% alef  
a=2  
b=3  
k=60  
num=[k]  
c=(s+1)*(s+a)*(s+b)  
d=expand(c)  
den=sym2poly(d)  
Transfrfunc=tf(num,den)  
rlocus(Transfrfunc)
```



(ب)

```
% be
a=1
b=1
k=8

num=[k]
c=(s+1)*(s+a)*(s+b)
d=expand(c)
den=sym2poly(d)
Transfrfunc=tf(num,den)
rlocus(Transfrfunc)
```



سوال ۲:

```
clc
clear
close all

syms k s
```

(الف)

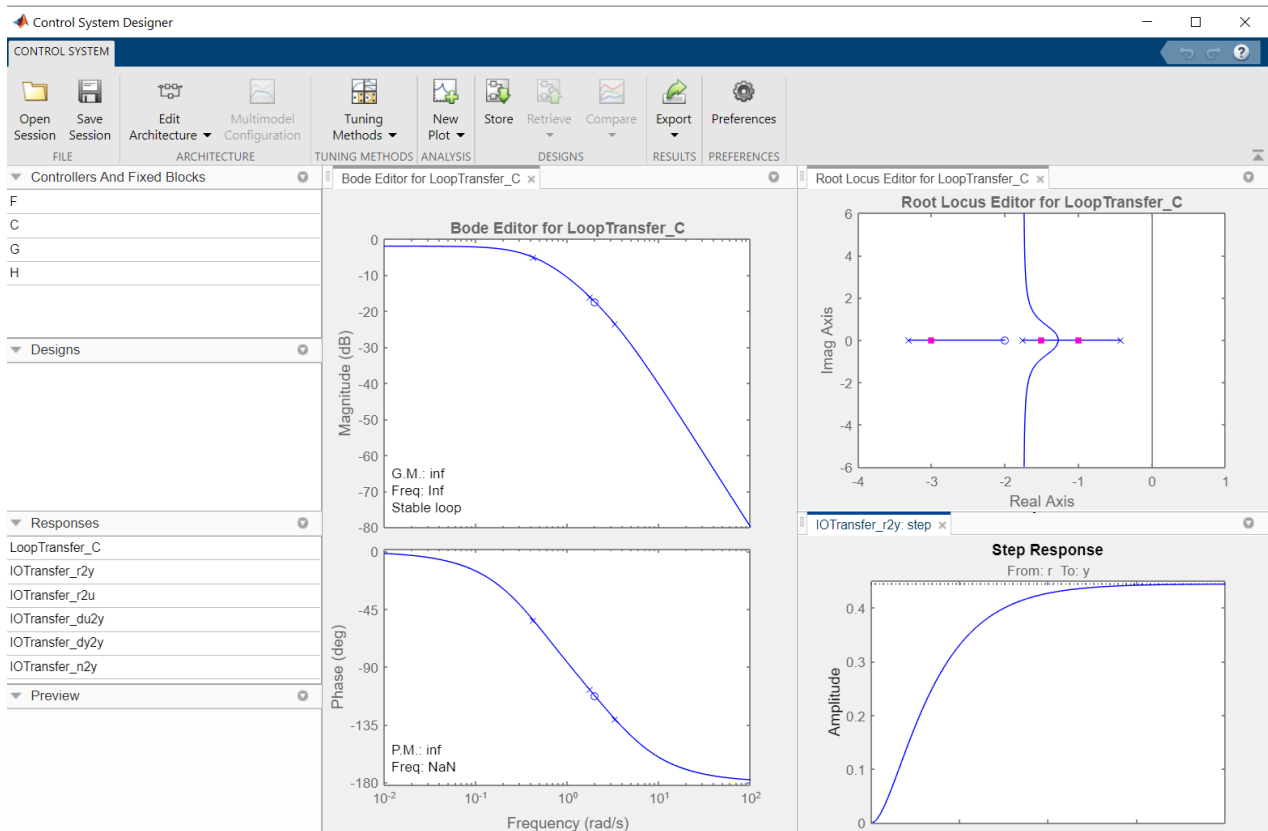
```
% alef
k=1
a=k*(s+2)
```

```

b=expand(a)
num=sym2poly(b)
den=[1 5.5 8 2.5]
g=tf(num,den)

```

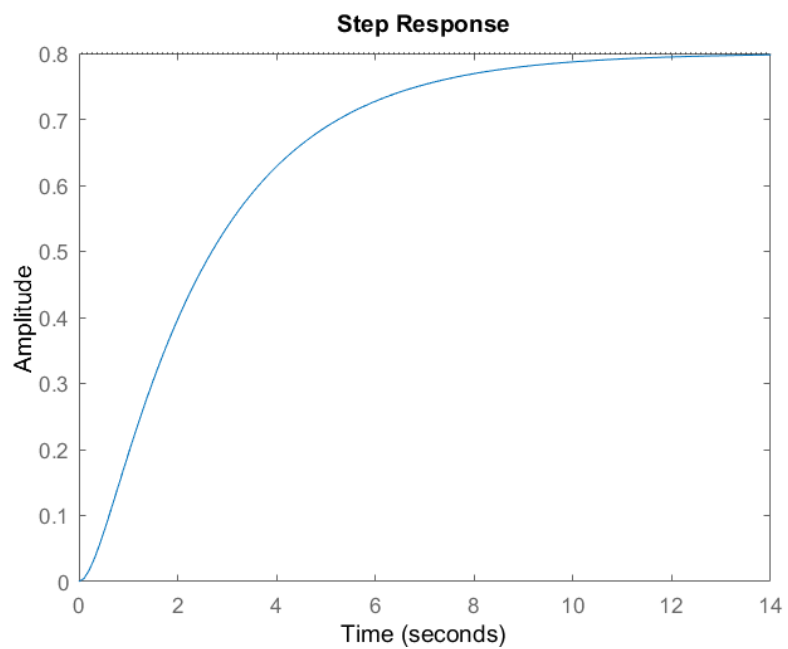
```
sisotool(g)
```



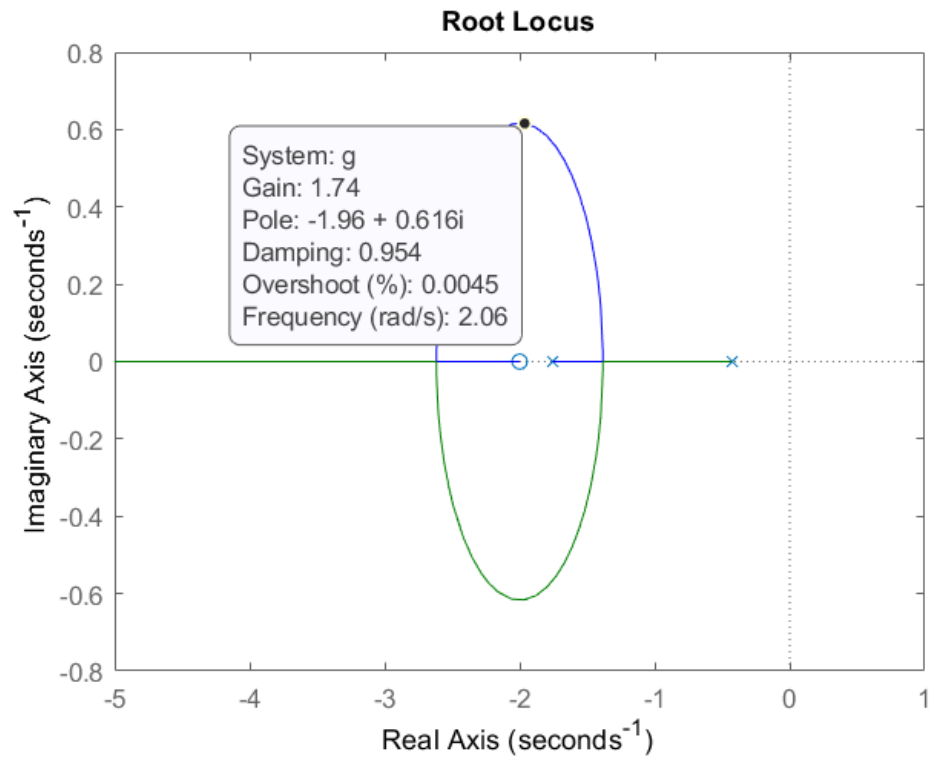
```

% be
step(g)

```



(.)



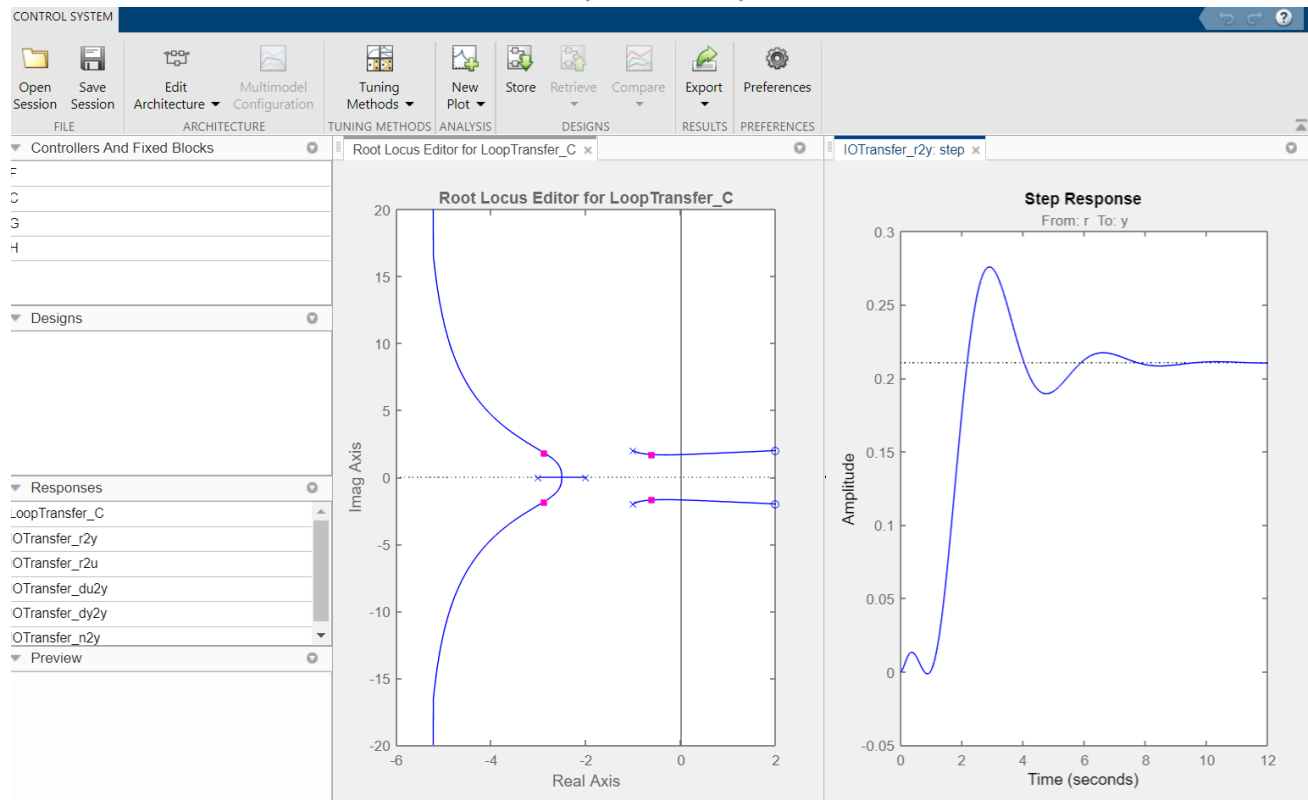
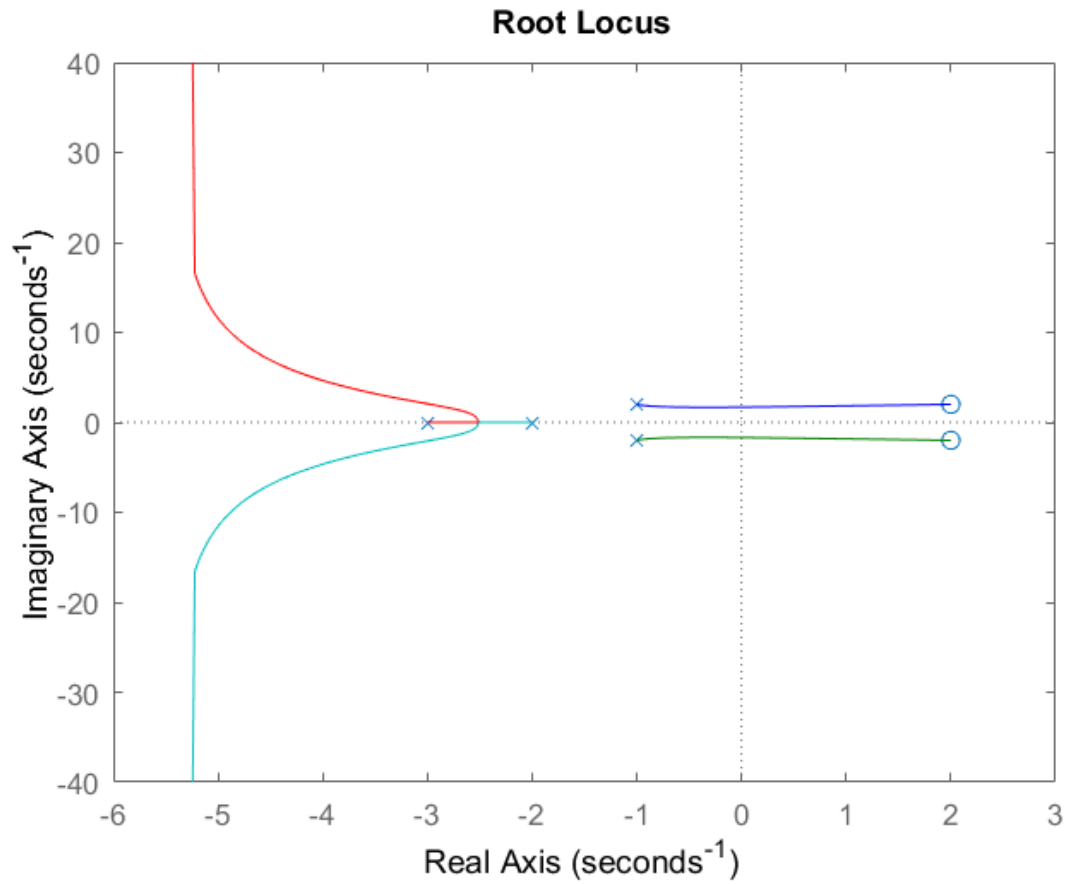
سوال ۳:

```
clc
clear
close all

syms k s
```

```
s = tf('s');
L = (s^2 - 4*s + 8)/((s+2)*(s+3)*(s^2 + 2*s + 5));
rlocus(L);
sisotool({'rlocus'}, L)
```

روش اول (نتیجه درست)



روش دوم (نتیجه نادرست)

```
k=1
num1=[k]
b=(s+2)*(s+3)
den1=sym2poly(b)
g=tf(num1,den1)

num2=[1 -4 8]
den2=[1 2 5]
h=tf(num2,den2)

sys=feedback(g, h)

rlocus(sys)
```

