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- expt5.slx
- expt4.m
- expt4.asv
- expt3l.m
- expt3.m
- expt3.1.m
- 15-2-21.m

expt3.1.m (Script)

Editor - C:\Users\ajayb\Documents\MATLAB\CS LAB\ES LAB\expt6a.m

expt6a.m

```
1   %%root locus for the given transfer function
2 - p=[36];
3 - q=[1 6 11 6];
4 - sys=tf(p,q);
5 - zpk(sys);
6 - rlocus(sys)
7 - grid;
8 - title('root locus for the transfer function')
9 - figure(1)
10
11  %%root locus for the given transfer function for pole at +1
12 - p=[36];
13 - q=[1 5 5 -5 5];
14 - sys=tf(p,q);
15 - zpk(sys);
16 - rlocus(sys)
17 - grid;
18 - figure(2)
19 - title('root locus for the transfer function for pole at +1')
20
21  %%root locus for the given transfer function for pole at -1
22 - p=[36];
23 - q=[1 7 17 17 6];
24 - sys=tf(p,q);
25 - zpk(sys);
26 - rlocus(sys)
27 - grid;
28 - figure(3)
29 - title('root locus for the transfer function for pole at -1')
```

Workspace

Name	Value
ans	1x1 zpk
p	[36,36]
q	[1,6,11,6]
sys	1x1 tf

Command Window

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UTF-8 script Ln 15 Col 10

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- expt3.1.m
- 15-2-21.m

expt3.1.m (Script)

Editor - C:\Users\ajayb\Documents\MATLAB\CS LAB\ES LAB\expt6a.m

expt6a.m

```
24 -    sys=tf(p,q);
25 -    zpk(sys);
26 -    rlocus(sys)
27 -    grid;
28 -    figure(3)
29 -    title('root locus for the transfer function for pole at -1')
30
31      %%root locus for the given transfer function for zero at +1
32 -    p=[36 -36];
33 -    q=[1 6 11 6];
34 -    sys=tf(p,q);
35 -    zpk(sys);
36 -    rlocus(sys)
37 -    grid;
38 -    figure(4)
39 -    title('root locus for the transfer function for zero at +1')
40
41      %%root locus for the given transfer function for zero at -1
42 -    p=[36 36];
43 -    q=[1 6 11 6];
44 -    sys=tf(p,q);
45 -    zpk(sys);
46 -    rlocus(sys)
47 -    grid;
48 -    figure(5)
49 -    title('root locus for the transfer function for zero at -1')
50
51
52
```

Workspace

Name	Value
ans	1x1 zpk
p	[36,36]
q	[1,6,11,6]
sys	1x1 tf

Command Window

>>

UTF-8 script Ln 15 Col 10

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Figure 1

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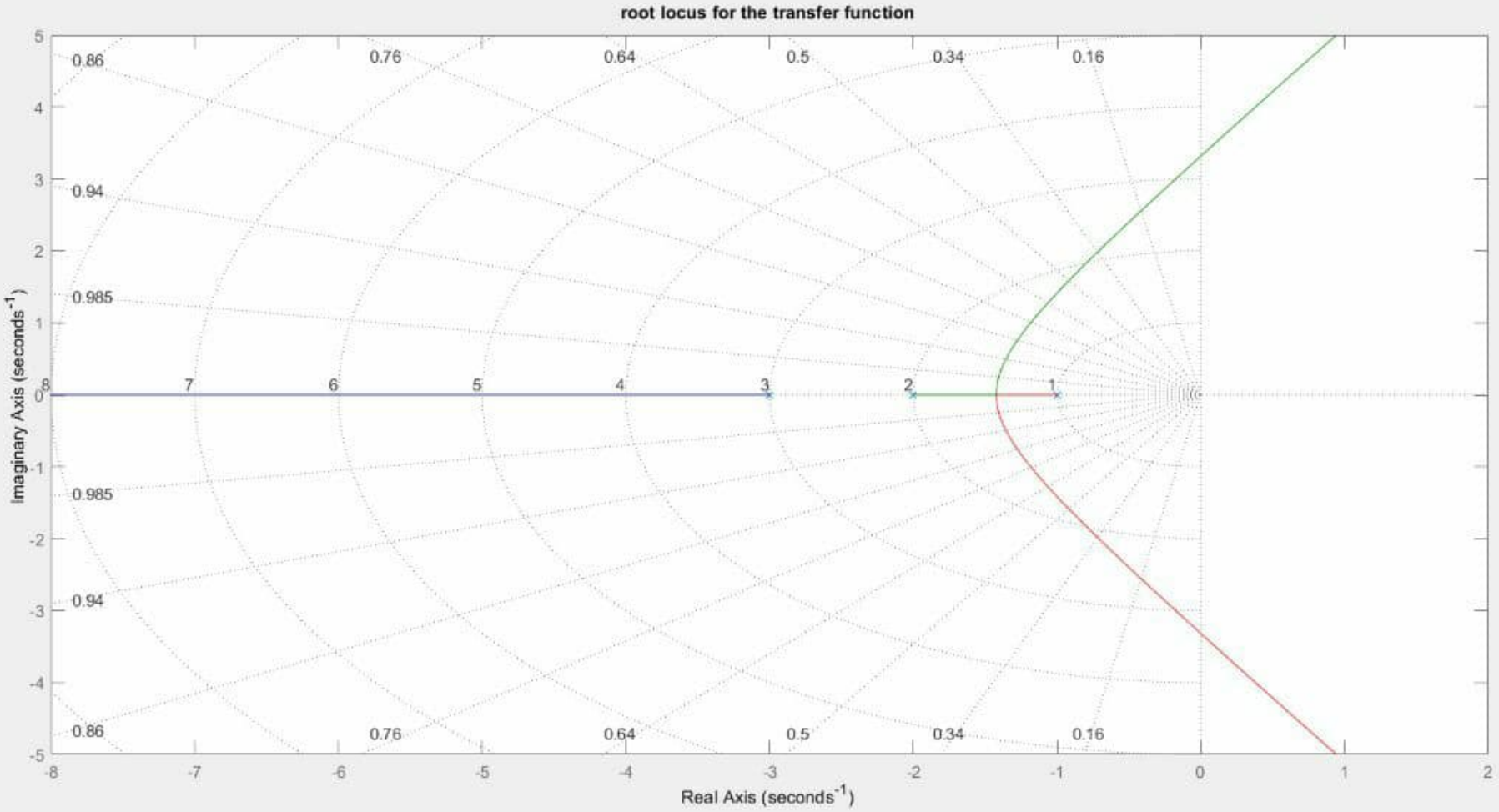

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Figure 1

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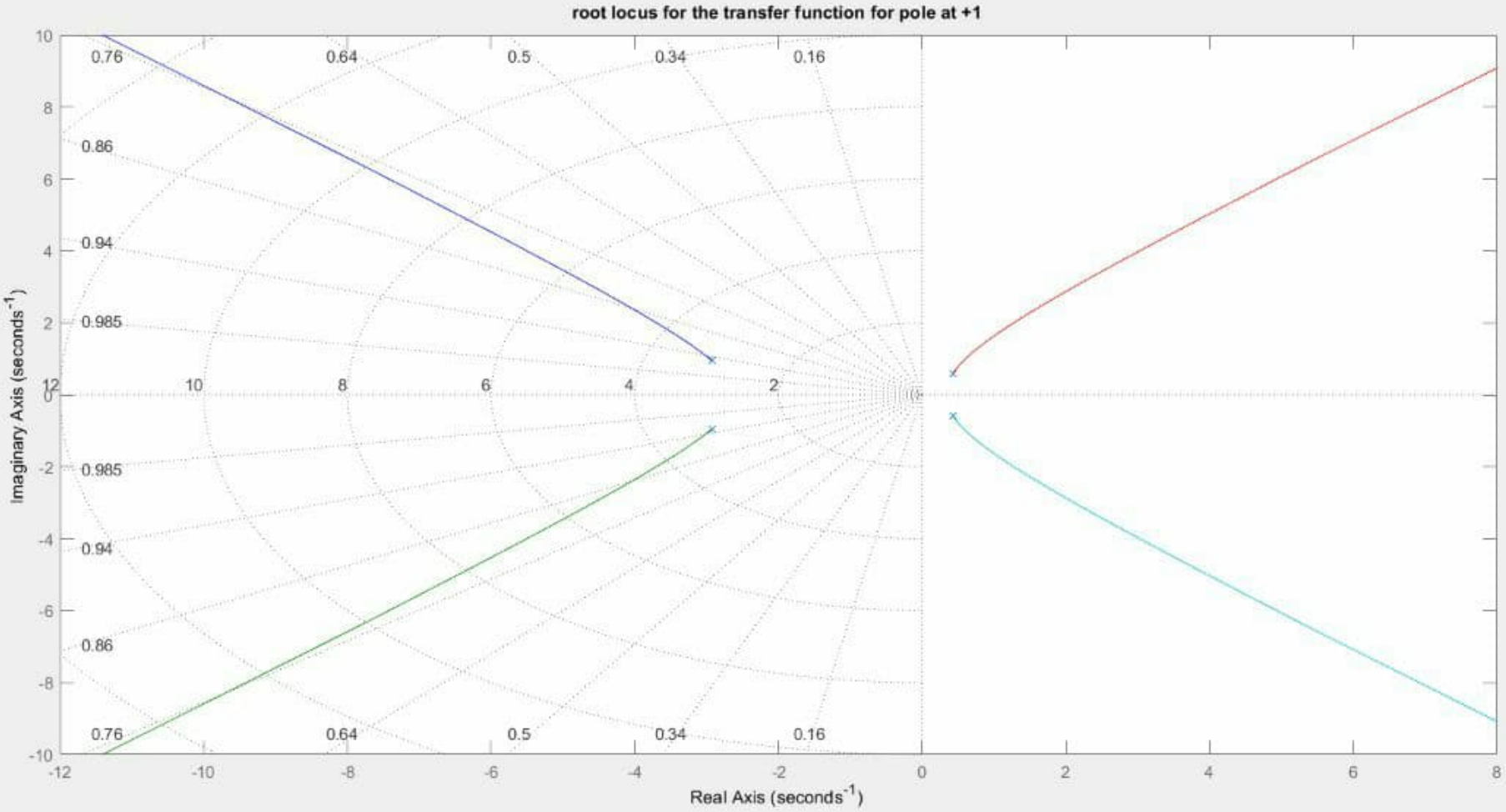

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Figure 3

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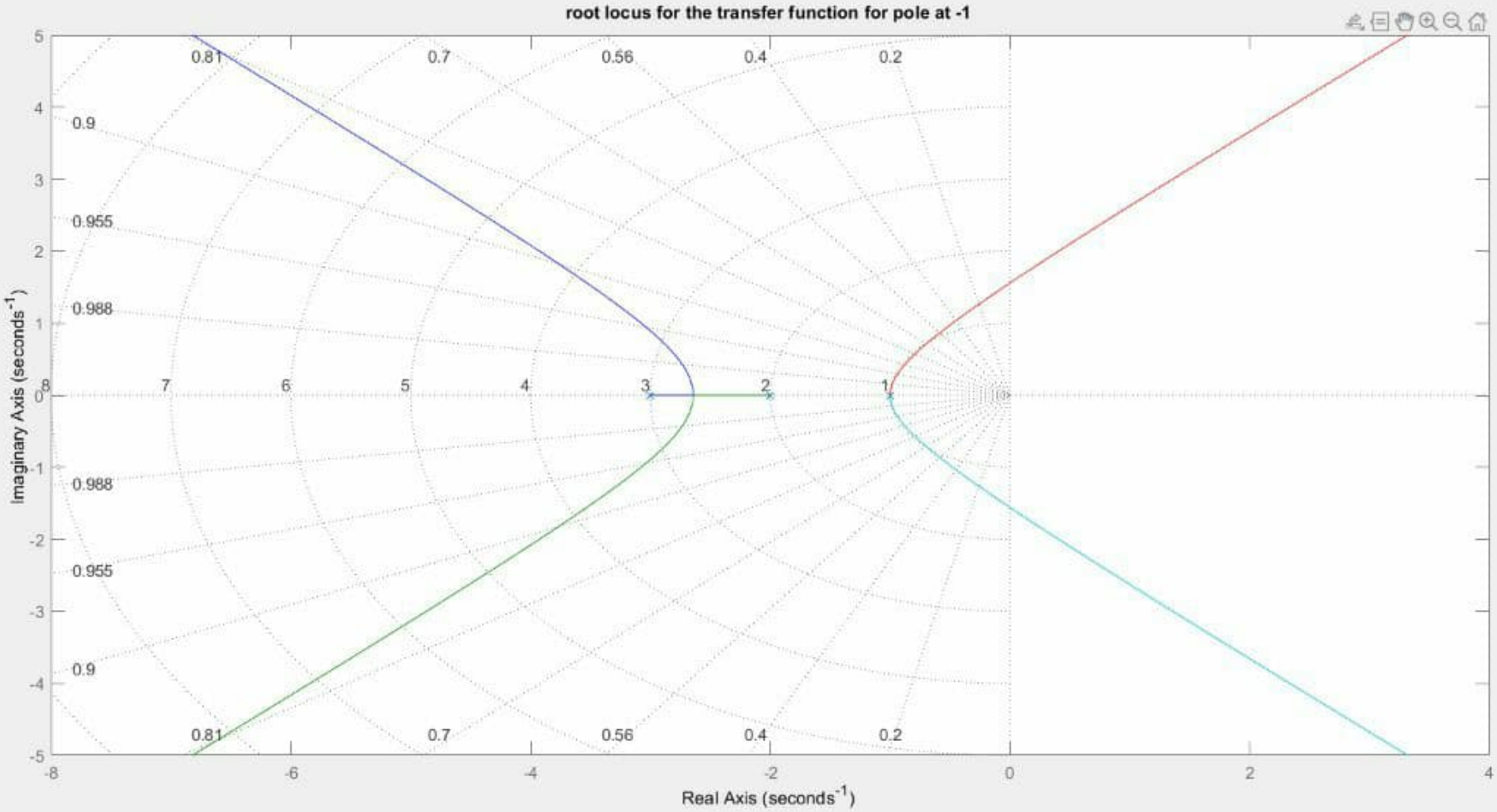

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Figure 1

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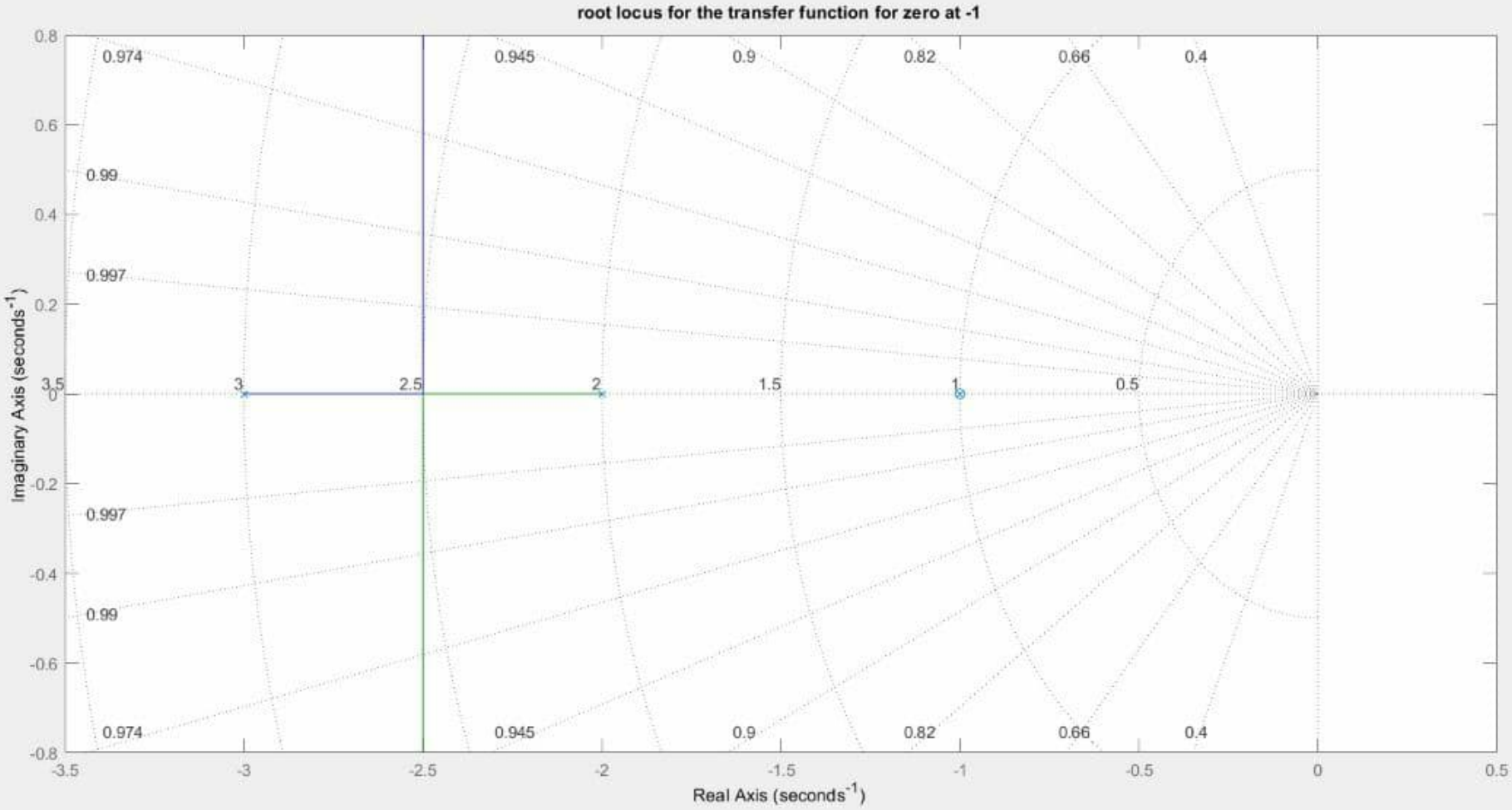

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Figure 1

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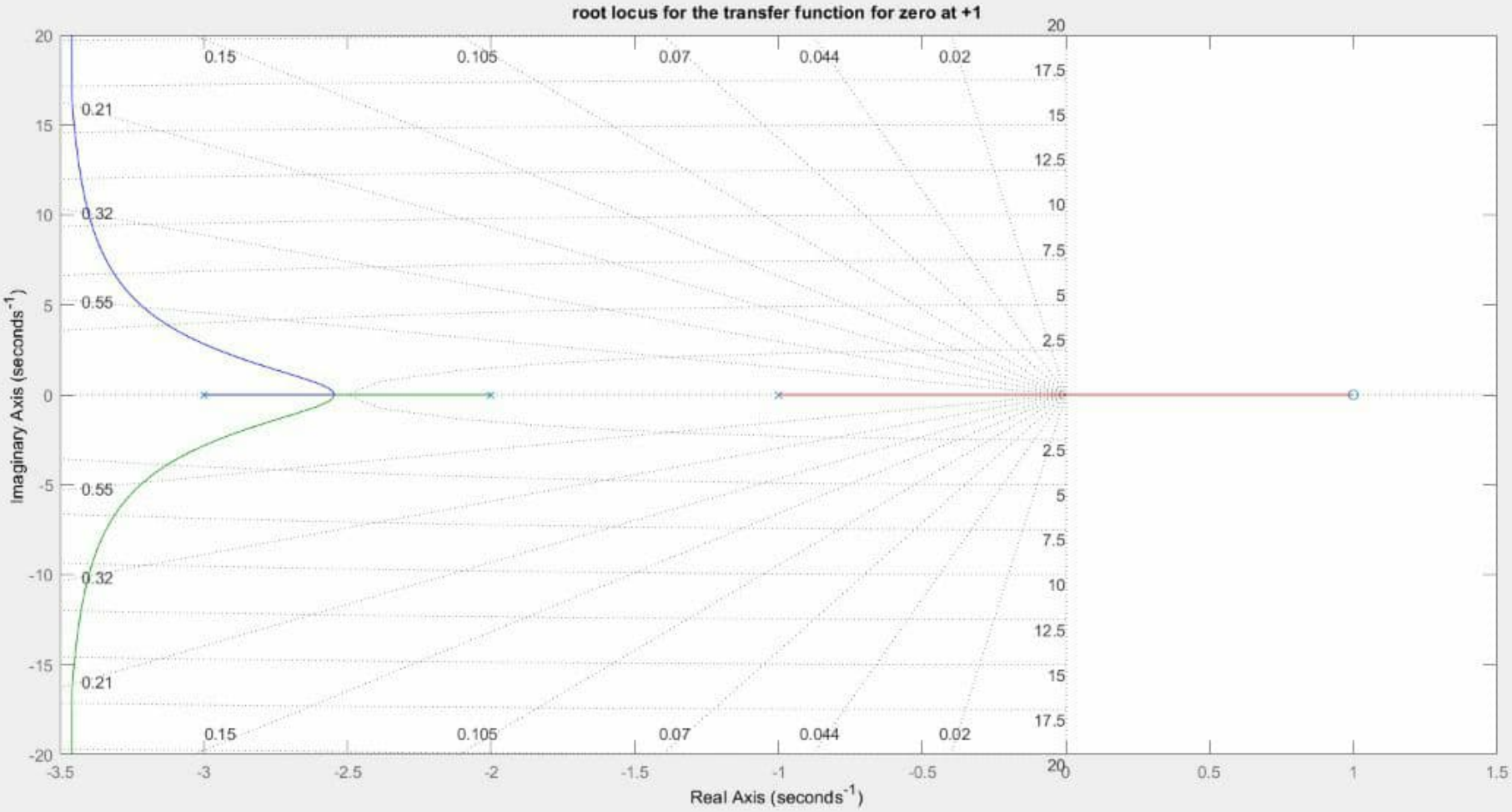

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Editor - C:\Users\HP\3D Objects\3-2\CS LAB\Untitled2.m

Untitled6.m Untitled2.m

```
1   %%stability for 3rd order system
2 - num=[10];
3 - den=[0.04,0.5,1,0];
4 - g2=tf(num,den);
5 - figure(5)
6 - bode(g2);
7 - margin(g2);
8 - title('Bode plot of 10/0.04s^3+0.5s^2+s');
9 - margin(g2);
10 - figure(6);
11 - nyquist(g2);
12 - title('Nyquist plot of 10/0.04s^3+0.5s^2+s');
13 - figure(7);
14 - rlocus(g2);
15 - title('Root locus of 10/0.04s^3+0.5s^2+s');
16
```

UTF-8 Ln 16 Col 1

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Figure 5

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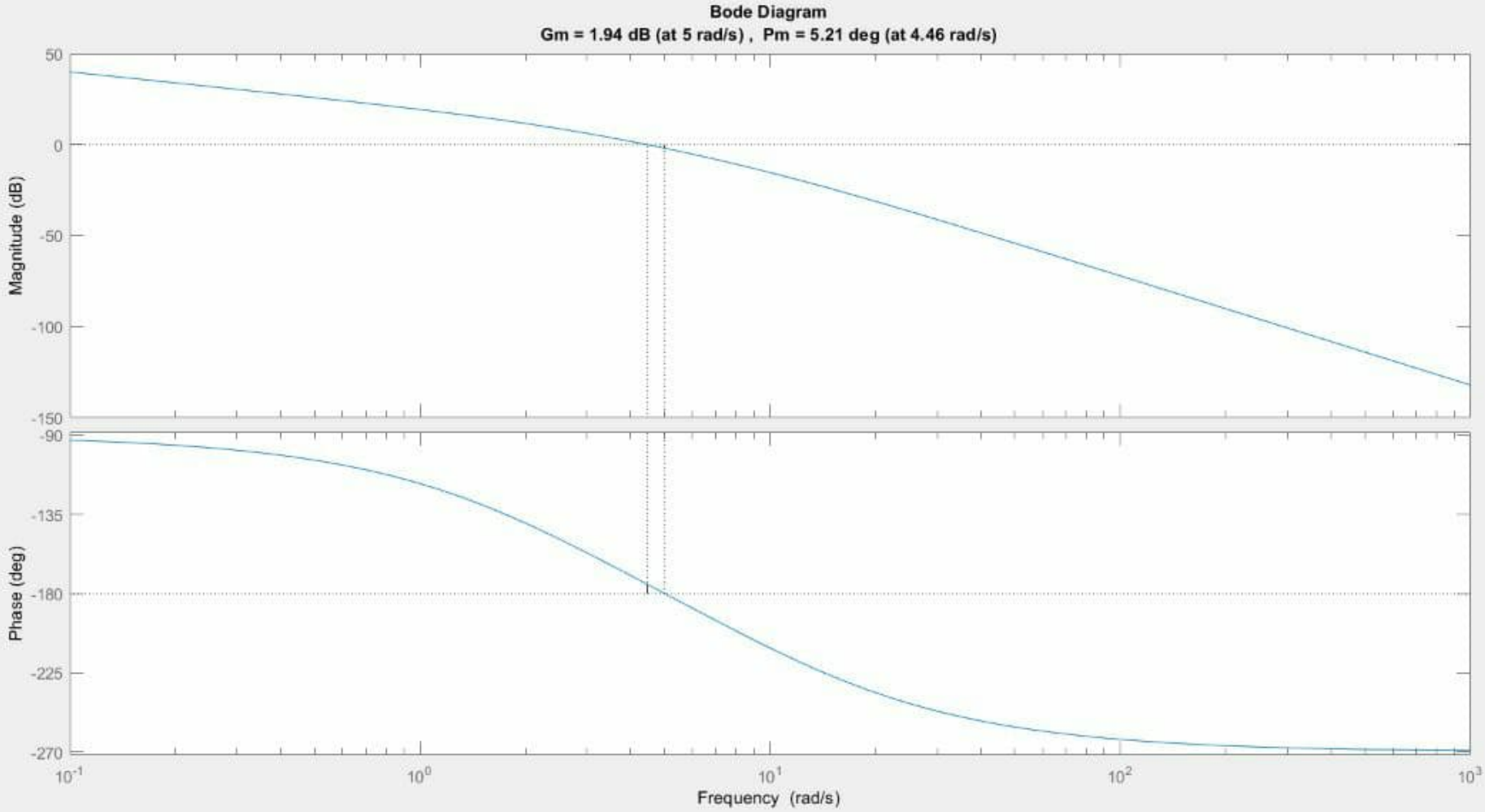

Figure 6

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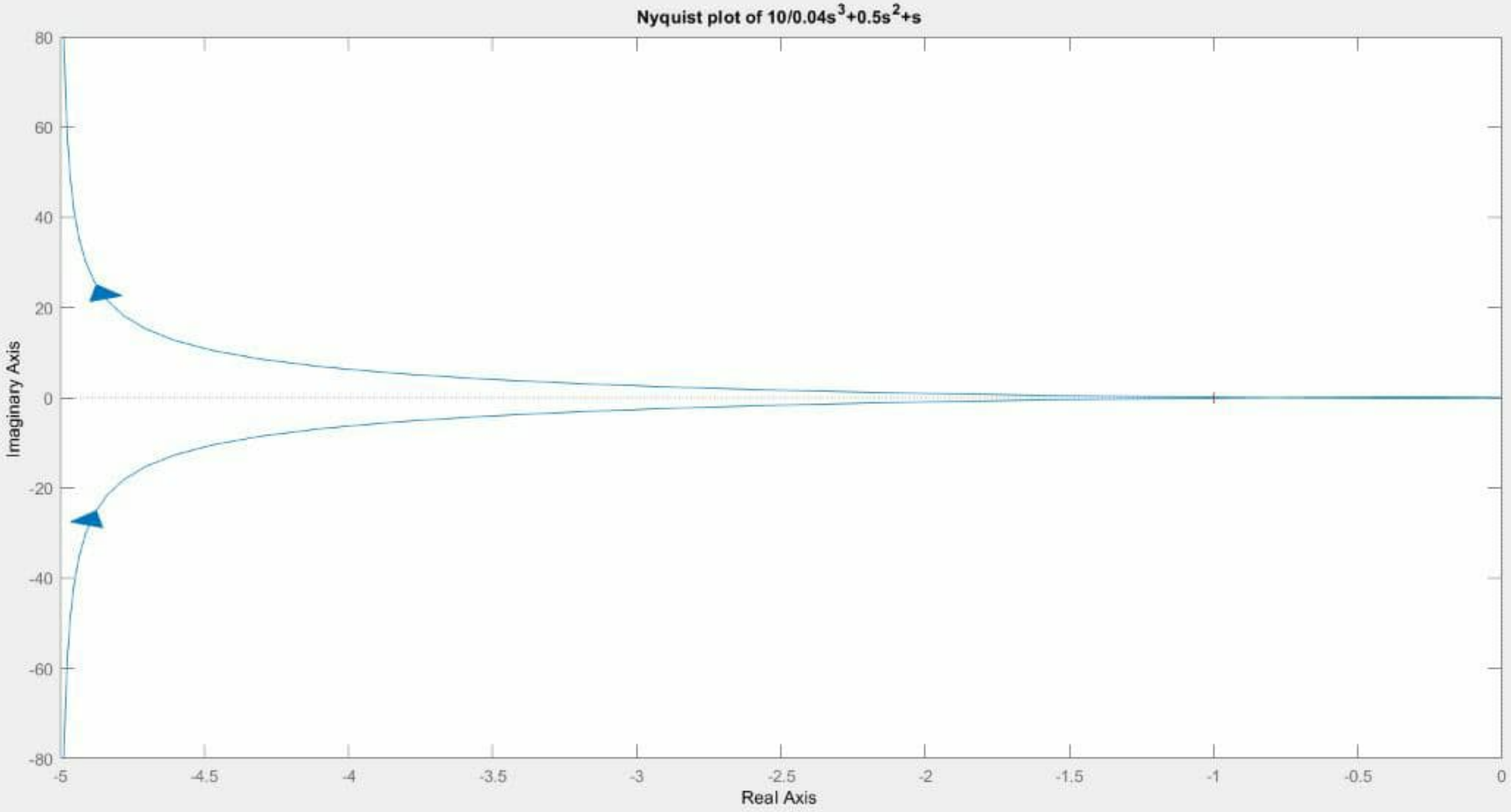

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Figure 7

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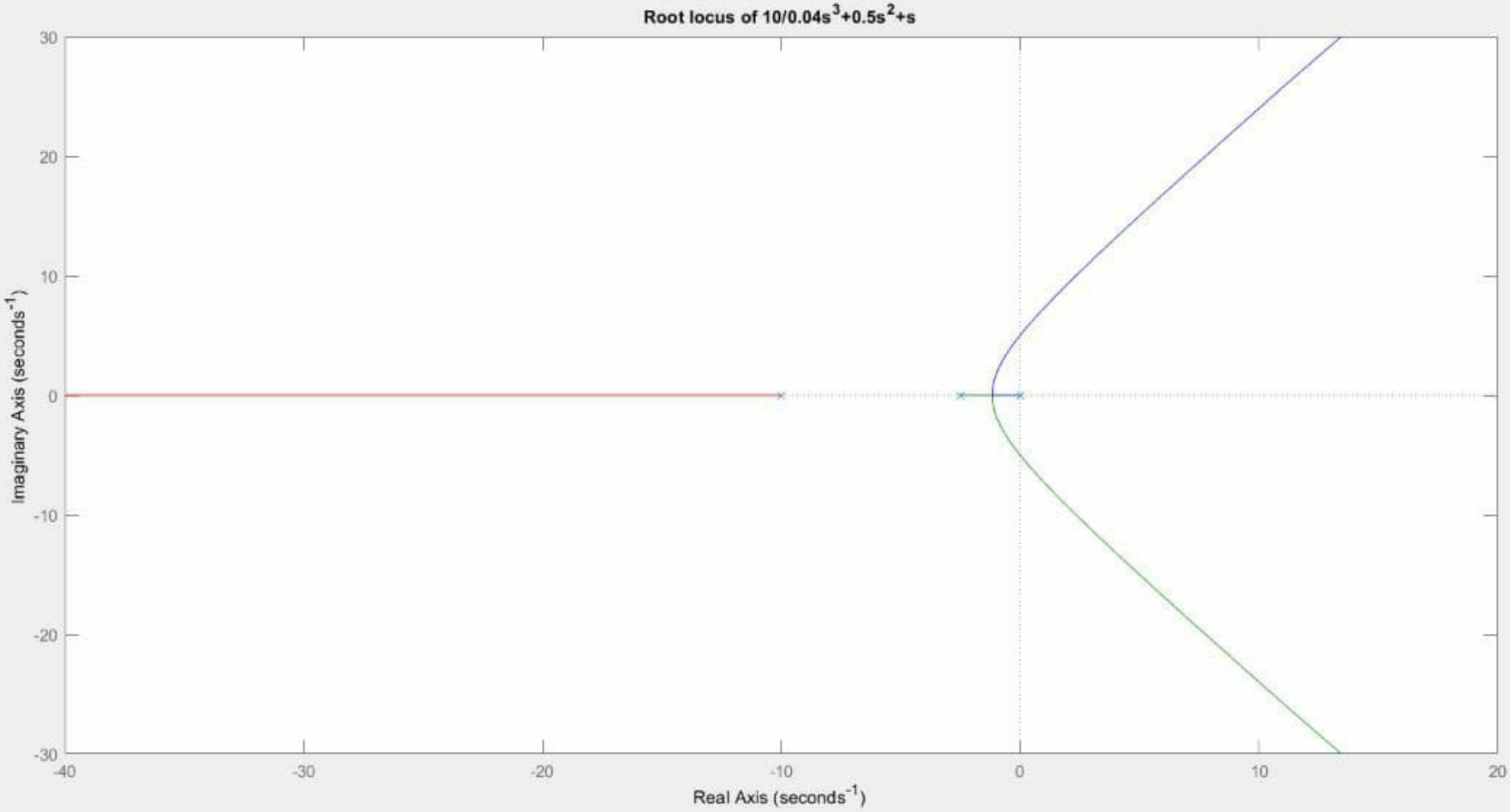

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- expt6a.m
- expt5.slx
- expt4.m
- expt4.asv
- expt3l.m
- expt3.m
- expt3.1.m
- 15-2-21.m

expt3.1.m (Script)

Editor - C:\Users\ajayb\Documents\MATLAB\CS LAB\ES LAB\expt6c.m

expt6a.m | expt6c.m

```
1   %%nyquist plot for the transfer function
2 - p=[1]
3 - q=[1 3 2 0]
4 - g1=tf(p,q);
5 - margin(g1);
6 - figure(1);
7 - nyquist(g1);
8 - title('nyquist plot for the transfer function');
9 - figure(2)
10 - bode(g1);
11 - margin(g1);
12 - title('bode plot for the transfer function');
13 - figure(3);
14 - rlocus(g1);
15 - title('root locus for the transfer function');
16
17
```

Workspace

Name	Value
ans	1x1 zpk
g1	1x1 tf
p	1
q	[1,3,2,0]
sys	1x1 tf

Command Window

>>

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Figure 1

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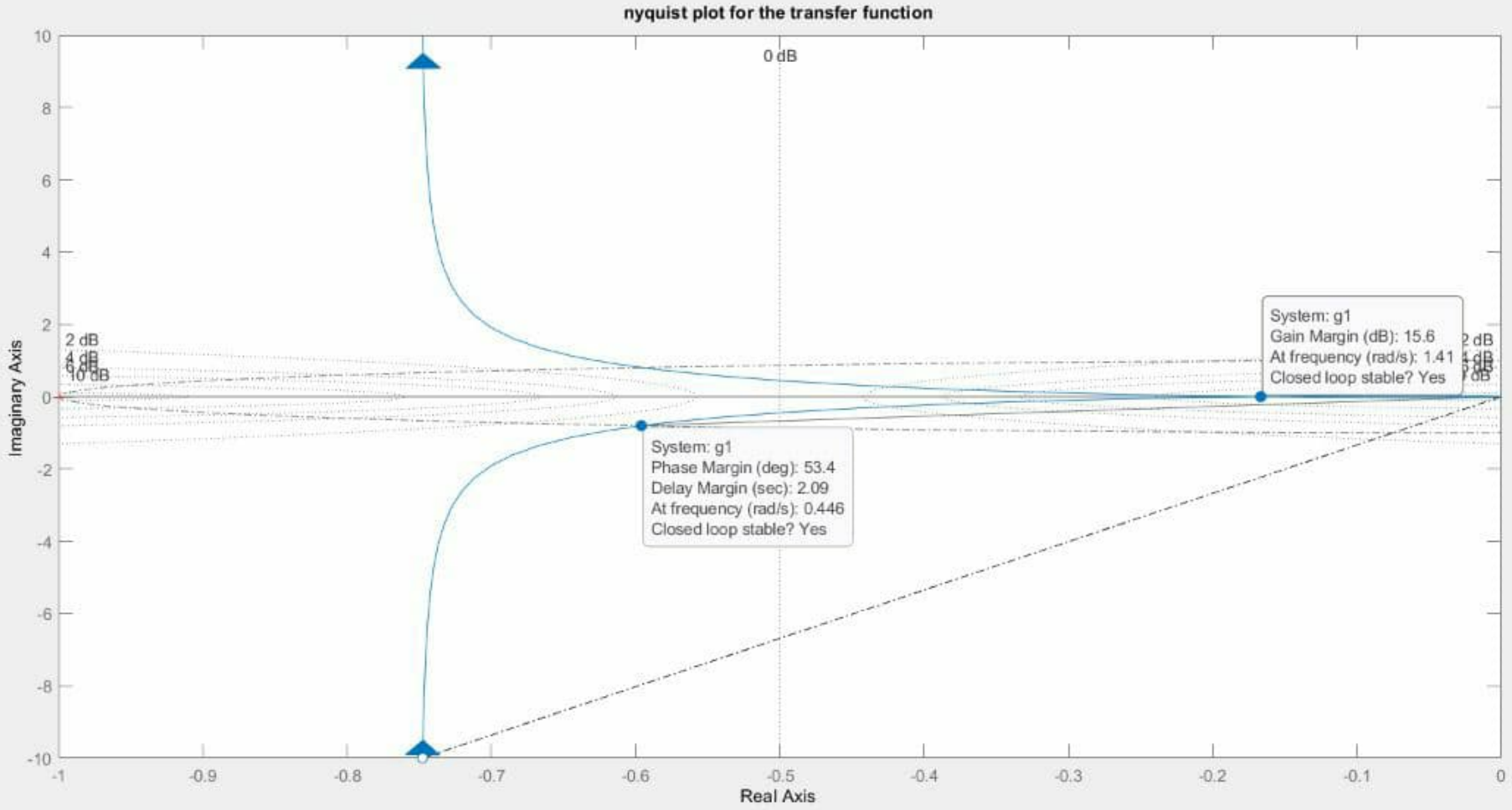

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Figure 3

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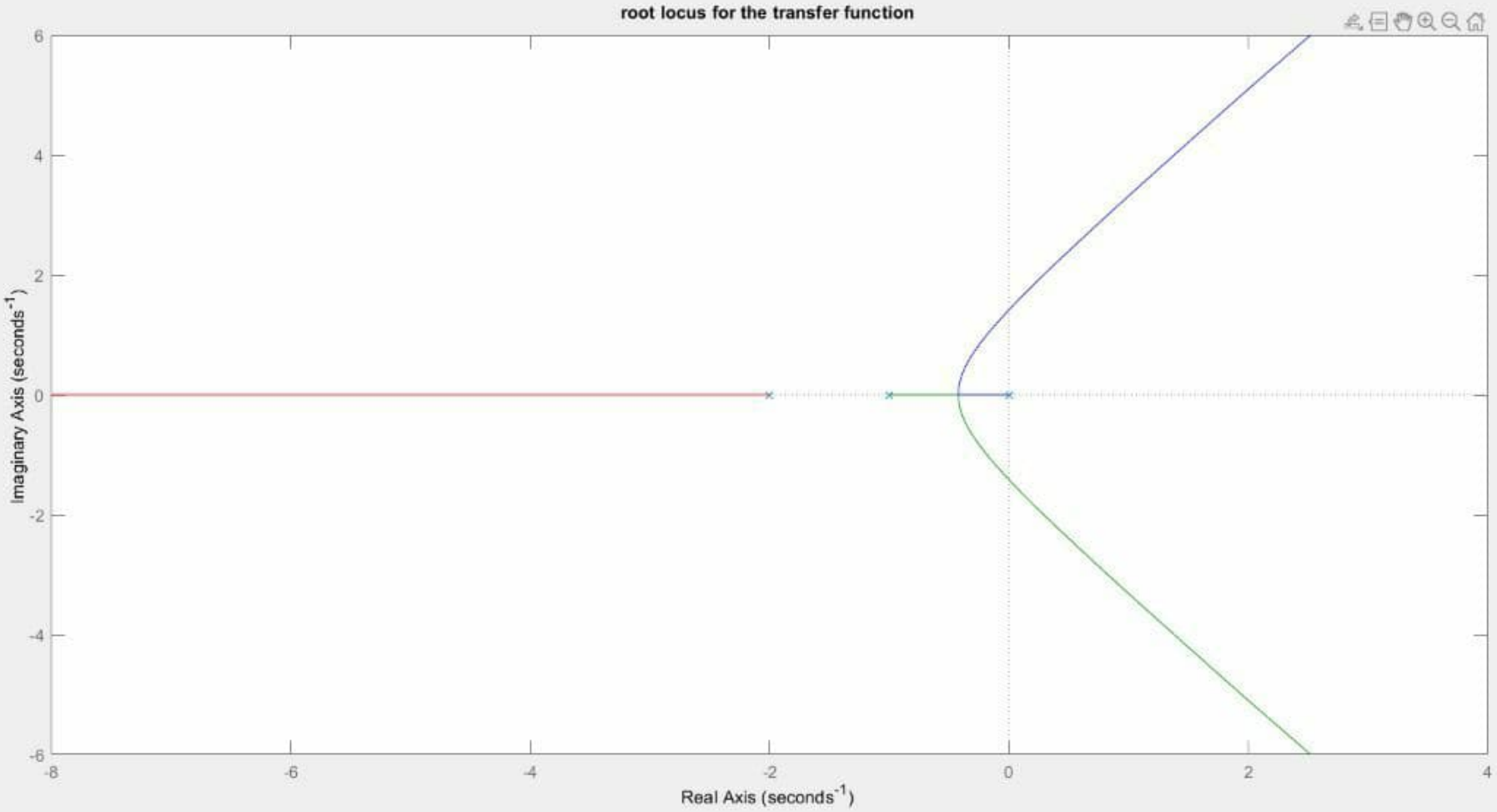

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Figure 1

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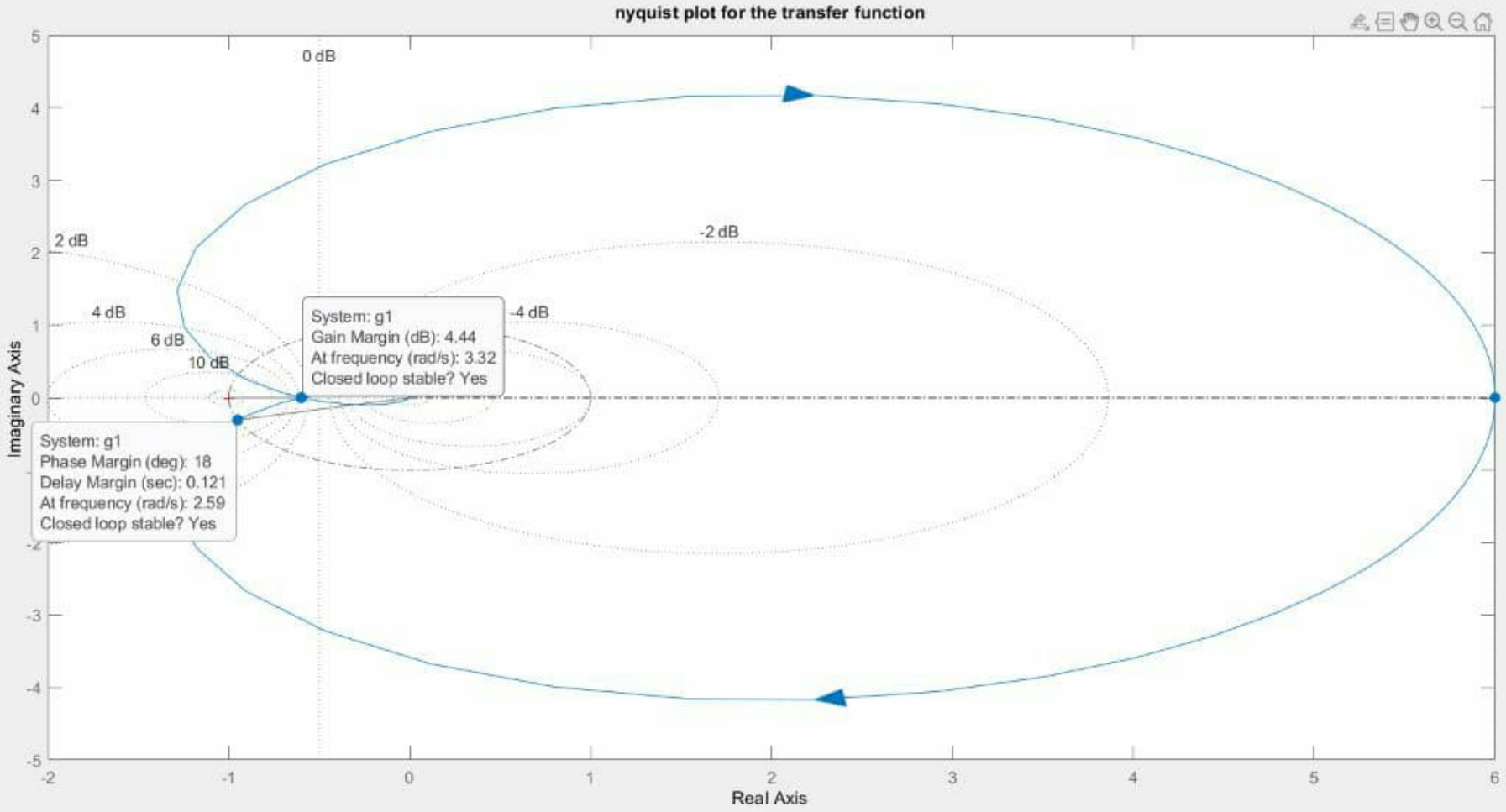

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Figure 2

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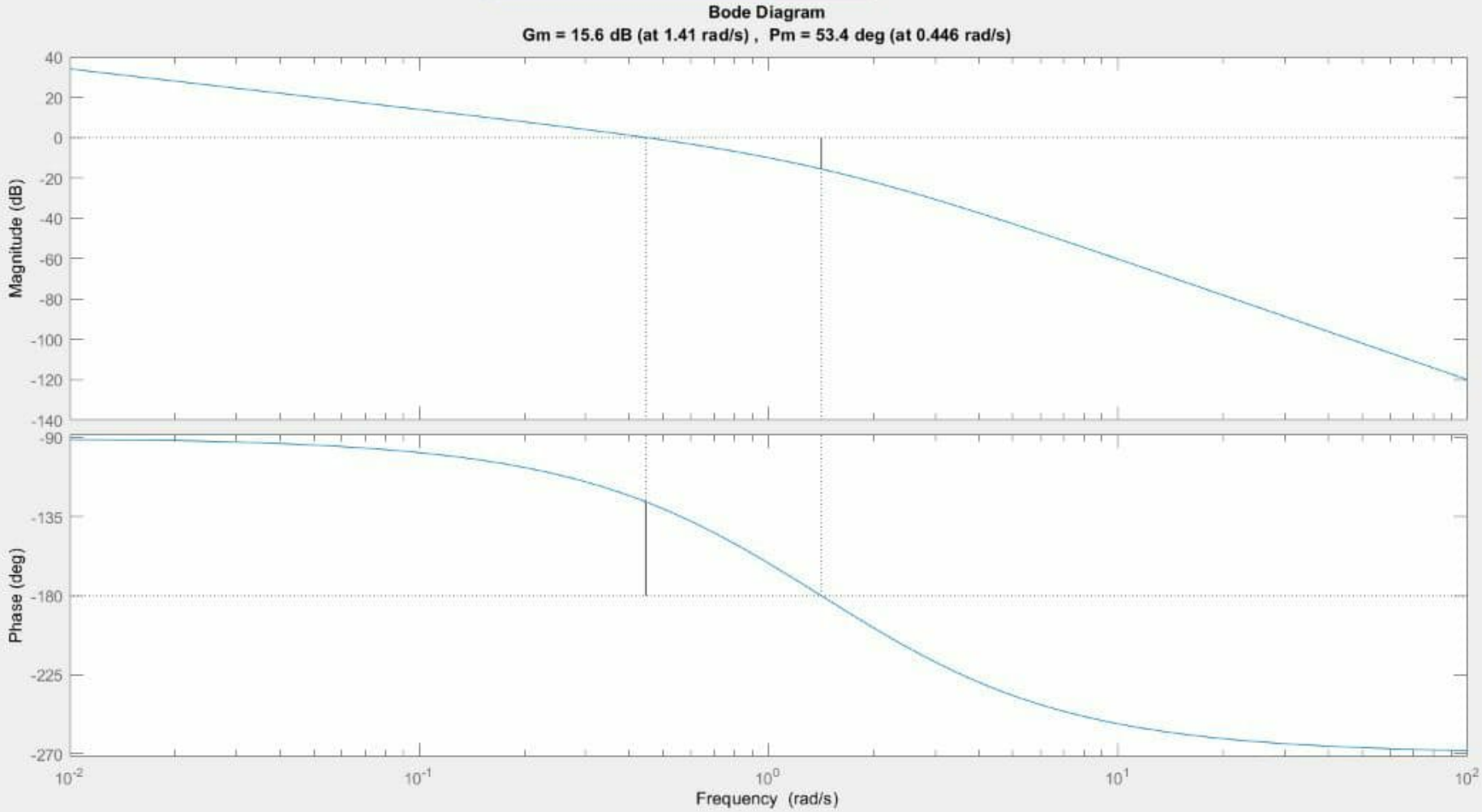

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Figure 2

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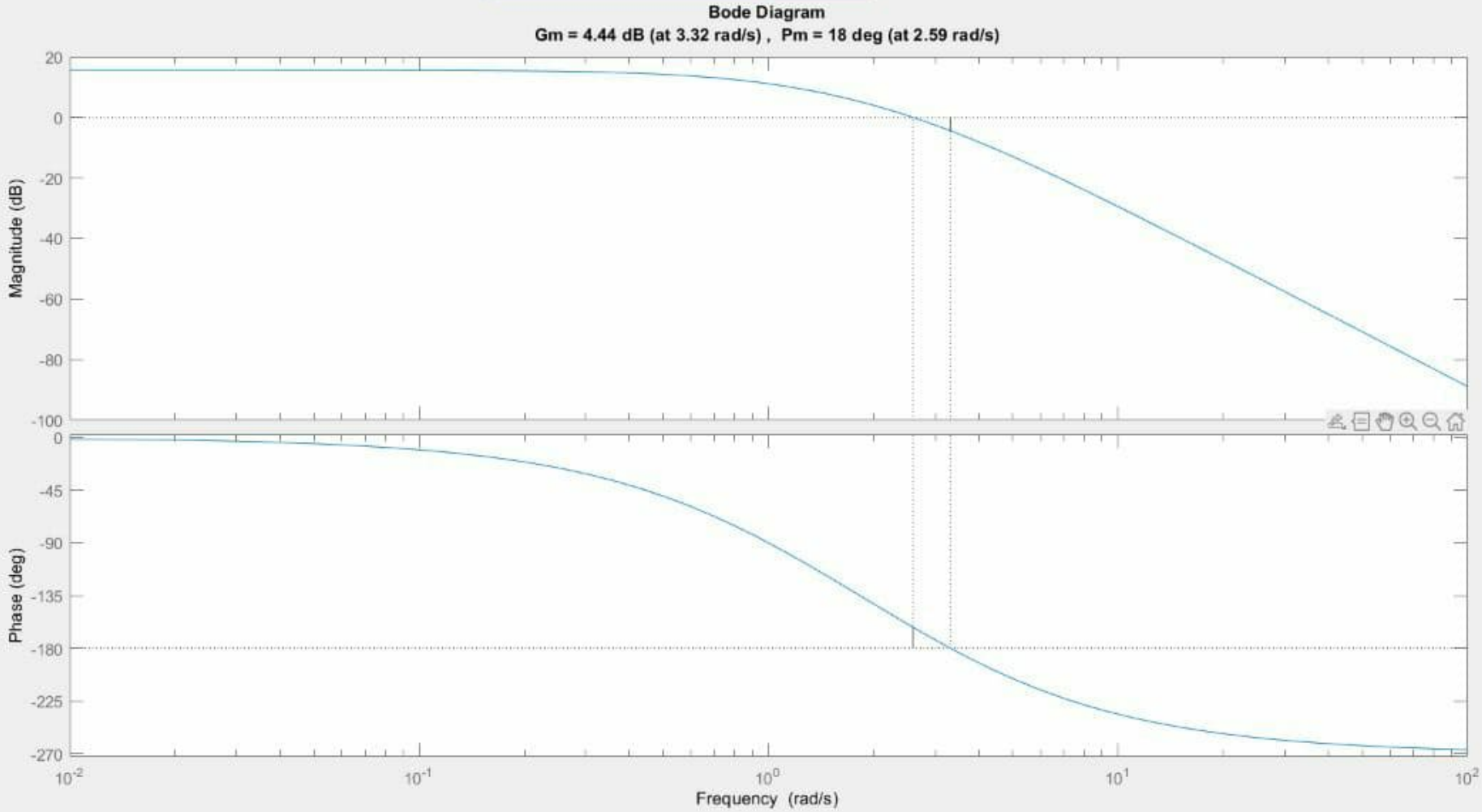

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Figure 3

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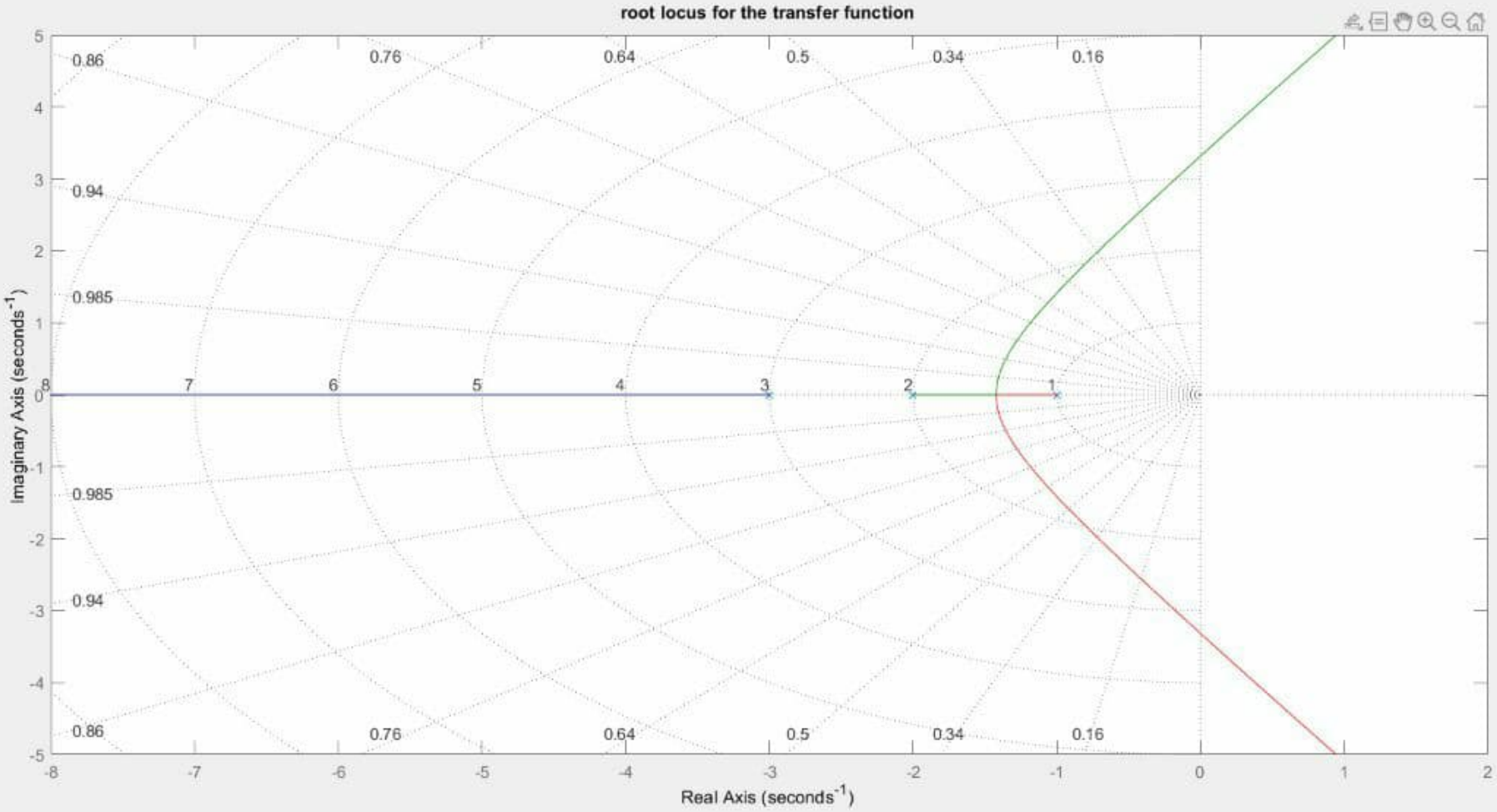

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- expt5.slx
- expt4.m
- expt4.asv
- expt3l.m
- expt3.m
- expt3.1.m
- 15-2-21.m

expt3.1.m (Script)

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expt6a.m | expt6c.m

```
1   %%nyquist plot for the transfer function
2 - p=[36]
3 - q=[1 6 11 6]
4 - g1=tf(p,q);
5 - margin(g1);
6 - figure(1);
7 - nyquist(g1);
8 - title('nyquist plot for the transfer function');
9 - figure(2)
10 - bode(g1);
11 - margin(g1);
12 - figure(3);
13 - rlocus(g1);
14 - title('root locus for the transfer function');
15
16
```

Workspace

Name	Value
ans	1x1 zpk
g1	1x1 tf
p	36
q	[1,6,11,6]
sys	1x1 tf

Command Window

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Figure 6

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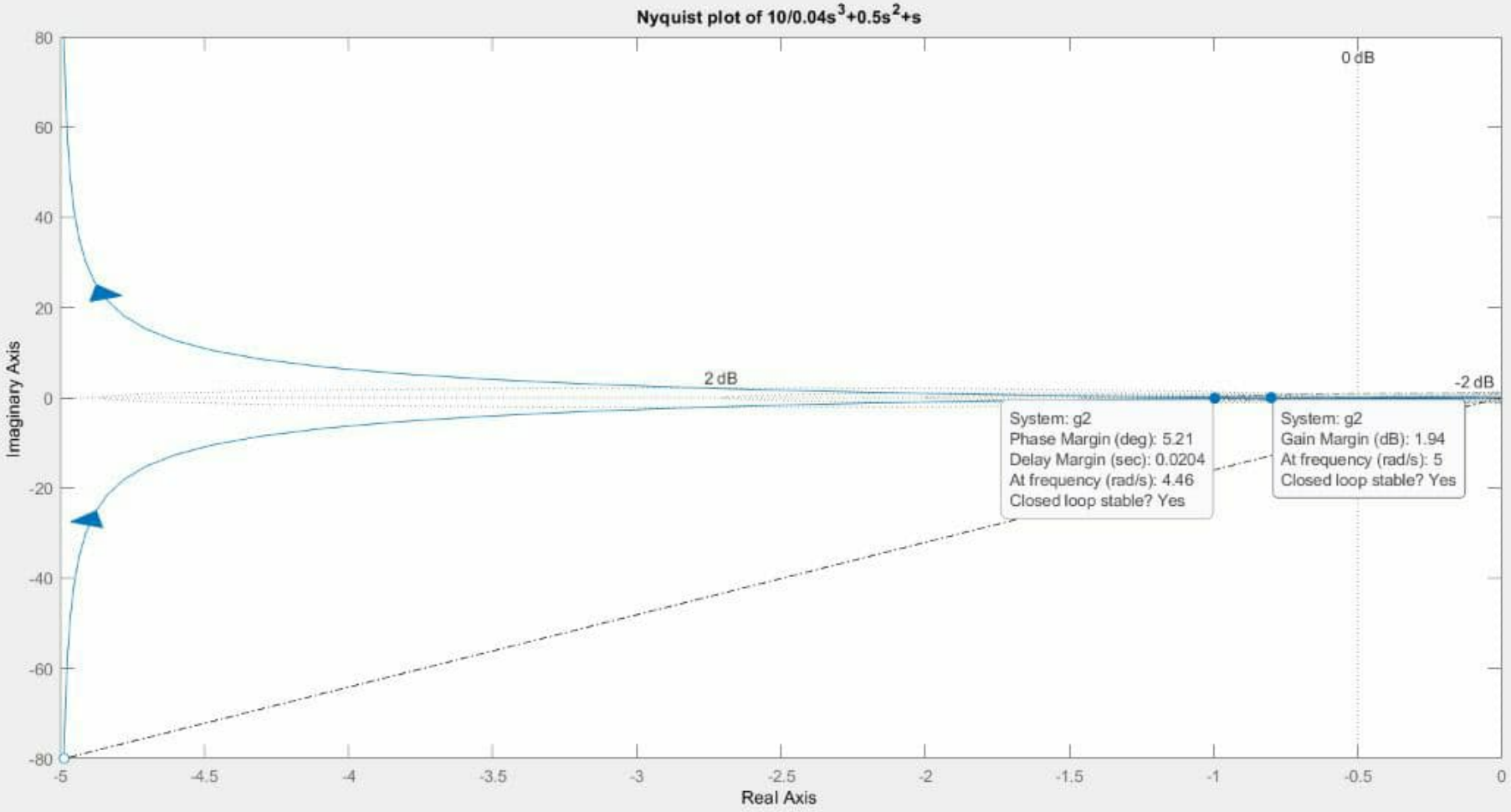

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Figure 10

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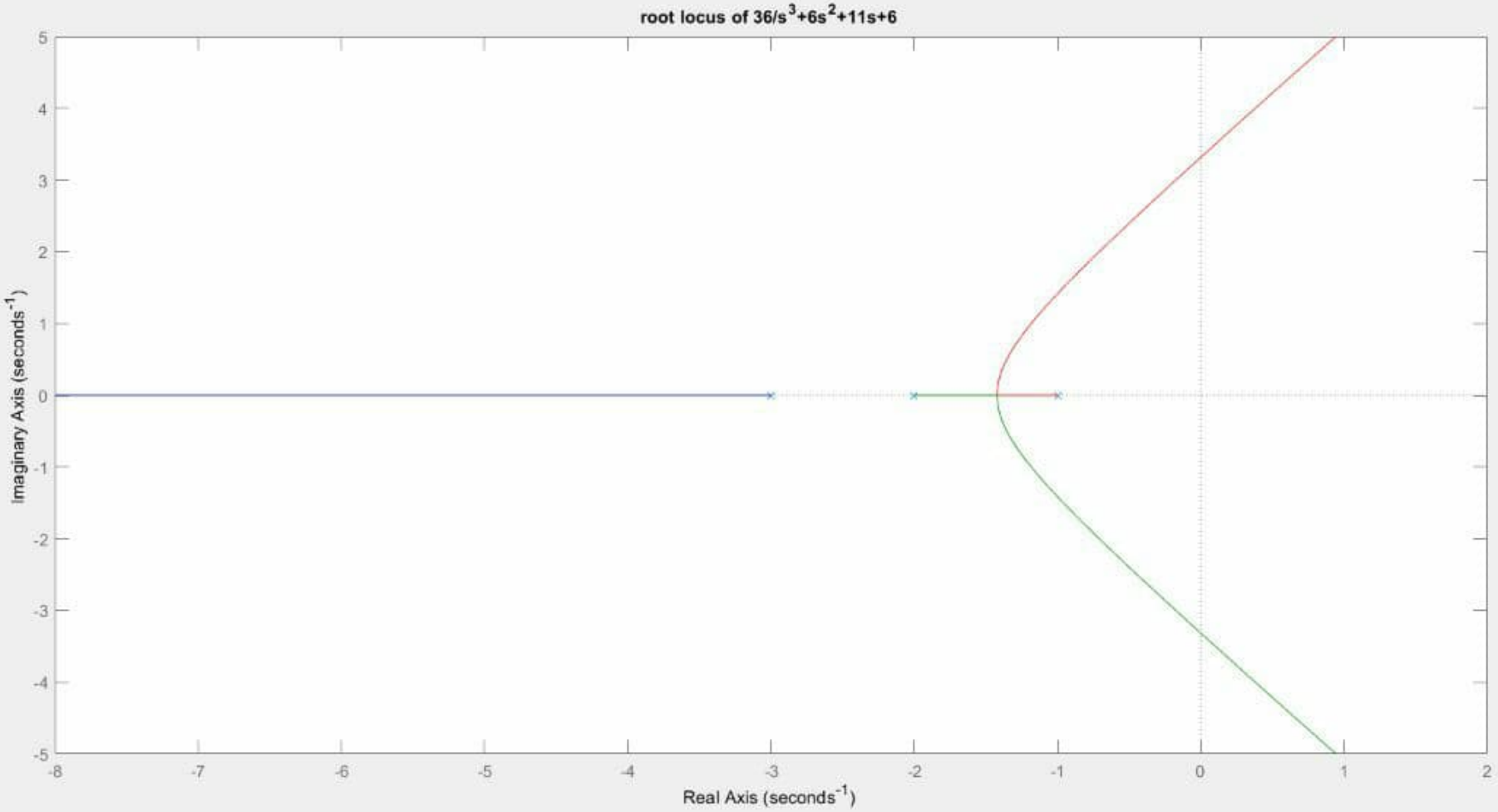

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Figure 3

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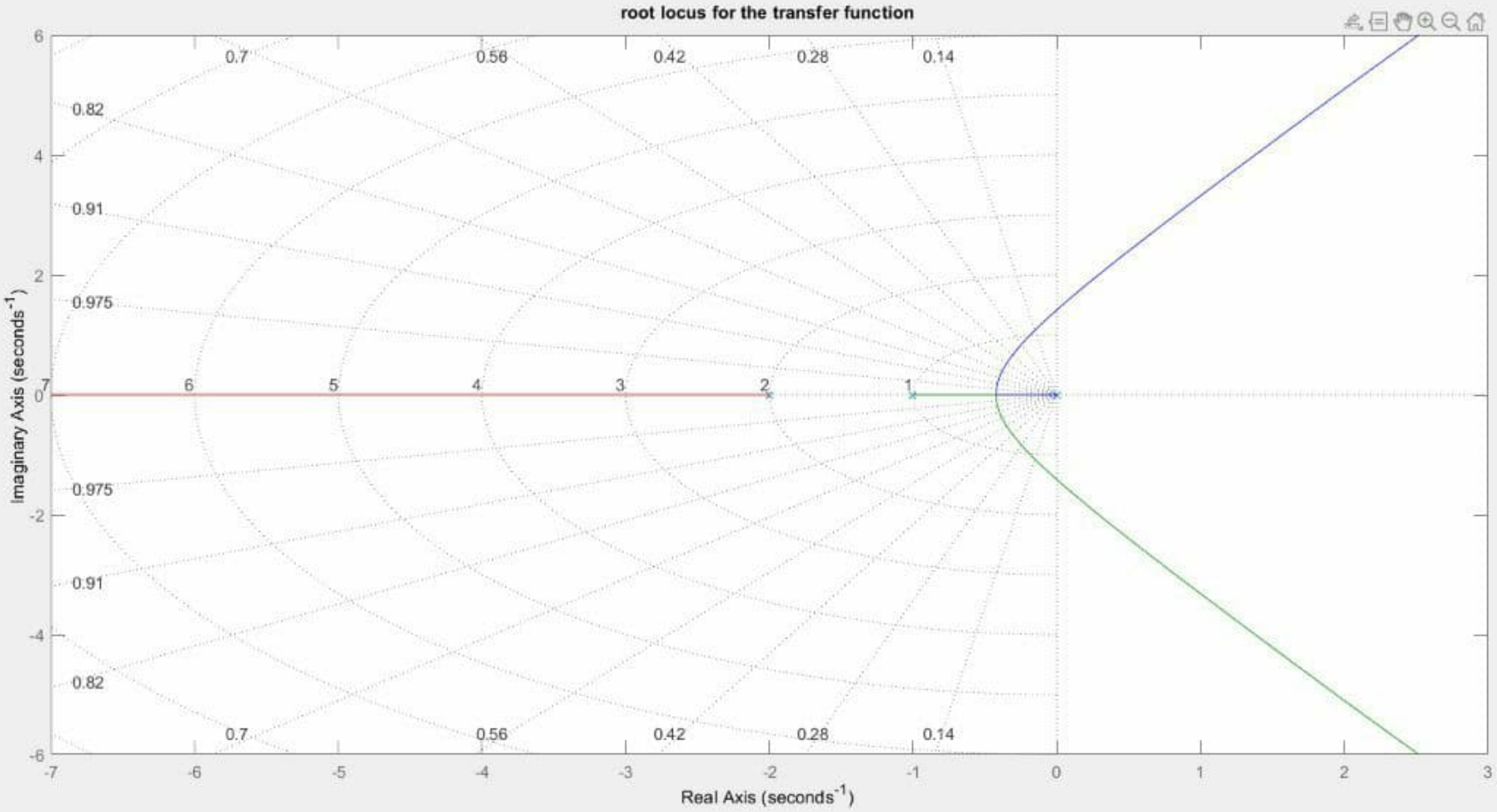

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