clc;

clear all;

close all;

display('controller')

n1=[1 2];

d1=[1 3];

g1=tf(n1,d1)

display('plant')

n2=[1 1];d2=[1 6 8]

g2=tf(n2,d2)

display('resultant transfer function')

gs=series(g1,g2)

output:

controller

g1 =

s + 2

-----

s + 3

Continuous-time transfer function.

plant

d2 =

1 6 8

g2 =

s + 1

-------------

s^2 + 6 s + 8

Continuous-time transfer function.

resultant transfer function

gs =

s^2 + 3 s + 2

-----------------------

s^3 + 9 s^2 + 26 s + 24

Continuous-time transfer function.

clc;

clear all;

close all;

n1=1;d1=[1 1];

display('TF1 is:')

printsys(n1,d1);

n2=[1 2];d2=[0 1];

display('tf2 is:')

printsys(n2,d2);

n3=[1 0];d3=[1 0 2];

display('tf3 is:')

printsys(n3,d3);

n4=[1 0];d4=[0 1];

display('tf4 is:')

printsys(n4,d4);

[n5,d5]=parallel(n1,d1,n2,d2);

printsys(n5,d5);

[n6,d6]=feedback(n3,d3,n4,d4);

printsys(n6,d6);

[n7,d7]=series(n5,d5,n6,d6);

display('overall transfer function')

printsys(n7,d7);

pzmap(n7,d7);

sgrid;

clc;

clear all;

close all;

n1=[1 2];d1=[1 3];

display('TF1 is:')

printsys(n1,d1);

n2=[1 1];d2=[1 6 8];

display('tf2 is:')

printsys(n2,d2);

n3=[1 0];d3=[1 0 2];

display('tf3 is:')

printsys(n3,d3);

n4=[1 0];d4=[0 1];

display('tf4 is:')

printsys(n4,d4);

[n5,d5]=series(n1,d1,n2,d2);

printsys(n5,d5);

[n6,d6]=feedback(n3,d3,n4,d4);

printsys(n6,d6);

[n7,d7]=series(n5,d5,n6,d6);

display('overall transfer function')

printsys(n7,d7);

pzmap(n7,d7);

sgrid;

clc;

clear all;

close all;

n1=[1 2];

d1=[1 3];

display('TF1 is:')

printsys(n1,d1);

n2=[1 1];d2=[1 6 8];

display('tf2 is:')

printsys(n2,d2);

n3=[1 2];

d3=[0 1];

display('Tf3 is : ')

printsys(n3,d3);

n4=1;

d4=[1 1];

display('Tf4 is : ')

printsys(n4,d4);

n5=[1 0];

d5=[1 0 2];

display('Tf5 is : ')

printsys(n5,d5);

n6=[1 0];

d6=[0 1];

display('Tf6 is : ')

printsys(n6,d6);

[n7,d7]=series(n1,d1,n2,d2);

printsys(n7,d7);

[n8,d8]=parallel(n4,d4,n3,d3);

printsys(n8,d8);

[n9,d9]=feedback(n5,d5,n6,d6);

printsys(n9,d9);

[n10,d10]=series(n7,d7,n8,d8);

printsys(n10,d10);

[n11,d11]=series(n10,d10,n9,d9);

display('overall transfer function:')

printsys(n11,d11);

pzmap(n11,d11);

sgrid;