clc

clear

close all

PMC = 50;

k=30;

G = zpk([],[-0.5 -1 -2 0],1);

figure(1)

margin(G);

grid;

PMU = 180 - -180;

thm=PMC - PMU + 8;

Wzp = (1-sind(thm))/(1+sind(thm));

Wgdb = 20\*log10((Wzp)^(0.5));

Wzp2 =0.95^2;

Wp = (Wzp2/Wzp)^(0.5);

Wz = Wp \* Wzp;

Gc = zpk([-(Wz) 1],[-(Wp) 1],1);

Gf = series(Gc\*(1/2),G);

figure(2)

margin(Gf);

grid;

figure(4)

rlocus(Gf)

Ga = feedback(Gf\*10,1);

figure(3)

step(Ga)



