% Noninverting Amplifier Highpass Filter

C1 = 0.1e-6; K = 7.3; j = sqrt(-1);

f\_pole = 30000;

R1 = 1/(2\*pi\*C1\*f\_pole);

Rf = (K - 1)\*R1;

f\_start = 10; f\_stop = f\_upper\*10;

step = (f\_stop - f\_start)/4096; freq = f\_start:step:f\_stop;

Tf = (1+j.\*2.\*pi.\*freq.\*(Rf+R1).\*C1)./(1+j.\*2.\*pi.\*freq.\*R1.\*C1);

Ms = 20\*log10(abs(Tf));

Ps = (180/pi)\*angle(Tf);

semilogx(freq,Ms),grid

figure

semilogx(freq,Ps),grid

