%for type 0

G=tf([1 4 3],[1 6 8])

T=feedback(G,1,-1)

t=0:1:100;

x1=ones(size(t));

x2=t;

x3=t.\*t;

[y1,t]=lsim(T,x1,t)

subplot(3,3,1),plot(t,x1,t,y1)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for step signal:type 0')

[y2,t]=lsim(T,x2,t)

subplot(3,3,2),plot(t,x2,t,y2)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for ramp signal:type 0')

[y3,t]=lsim(T,x3,t)

subplot(3,3,3),plot(t,x3,t,y3)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for parabolic signal:type 0')

%for type 1

G=tf([1 4 3],[1 6 8 0])

T=feedback(G,1,-1)

t=0:1:100;

x1=ones(size(t));

x2=t;

x3=t.\*t;

[y4,t]=lsim(T,x1,t)

subplot(3,3,4),plot(t,x1,t,y4)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for step signal:type 1')

[y5,t]=lsim(T,x2,t)

subplot(3,3,5),plot(t,x2,t,y5)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for ramp signal:type 1')

[y6,t]=lsim(T,x3,t)

subplot(3,3,6),plot(t,x3,t,y6)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for parabolic signal:type 1')

%for type 2

G=tf([1 4 3],[1 6 8 0 0])

T=feedback(G,1,-1)

t=0:1:100;

x1=ones(size(t));

x2=t;

[y7,t]=lsim(T,x1,t)

subplot(3,3,7),plot(t,x1,t,y7)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for step signal:type 2')

[y8,t]=lsim(T,x2,t)

subplot(3,3,8),plot(t,x2,t,y8)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for ramp signal:type 2')

t1=(0:1:10)

x4=t1.\*t1;

[y9,t1]=lsim(T,x4,t1)

subplot(3,3,9),plot(t1,x4,t1,y9)

hold on;

grid on;

xlabel('time')

ylabel('amplitude')

title('Steady State response for parabolic signal:type 2')