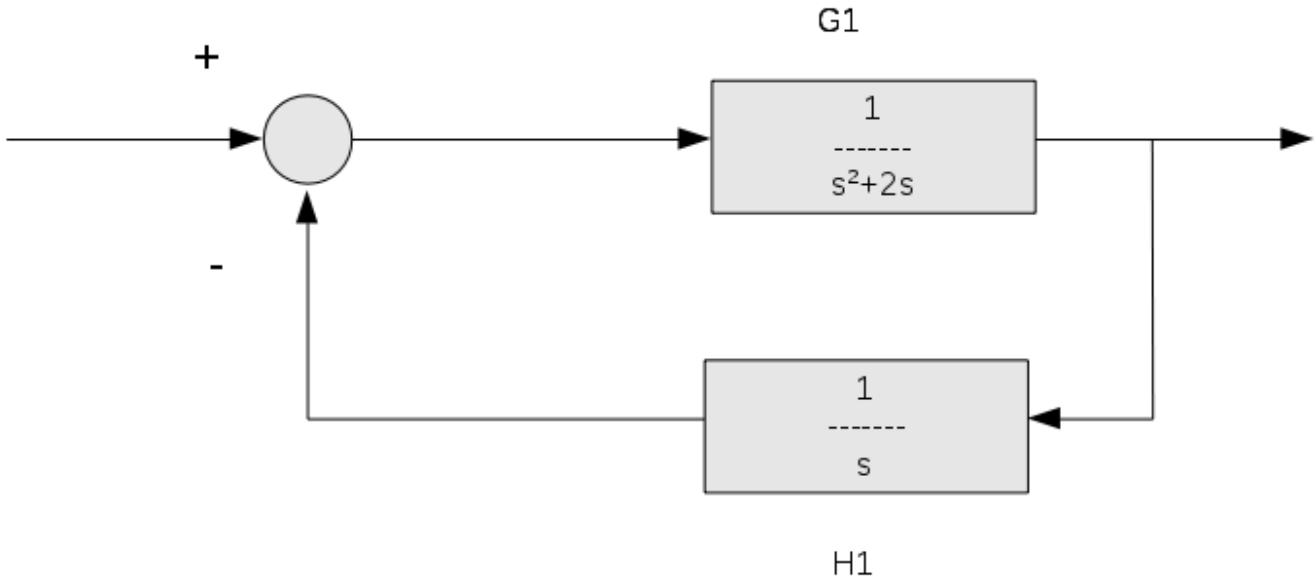
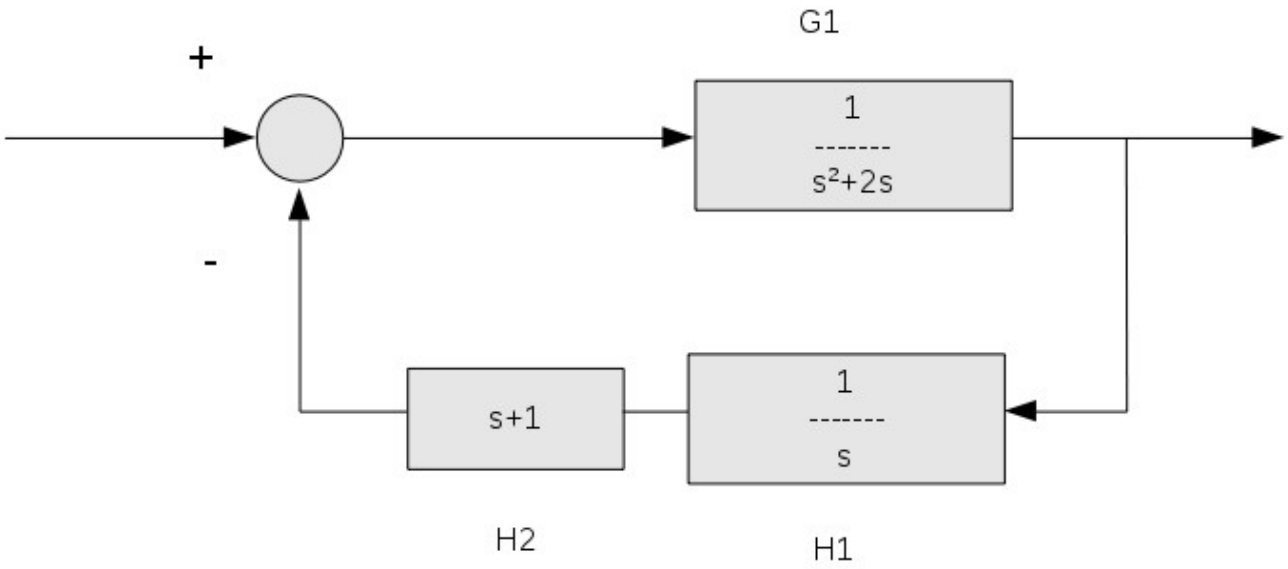
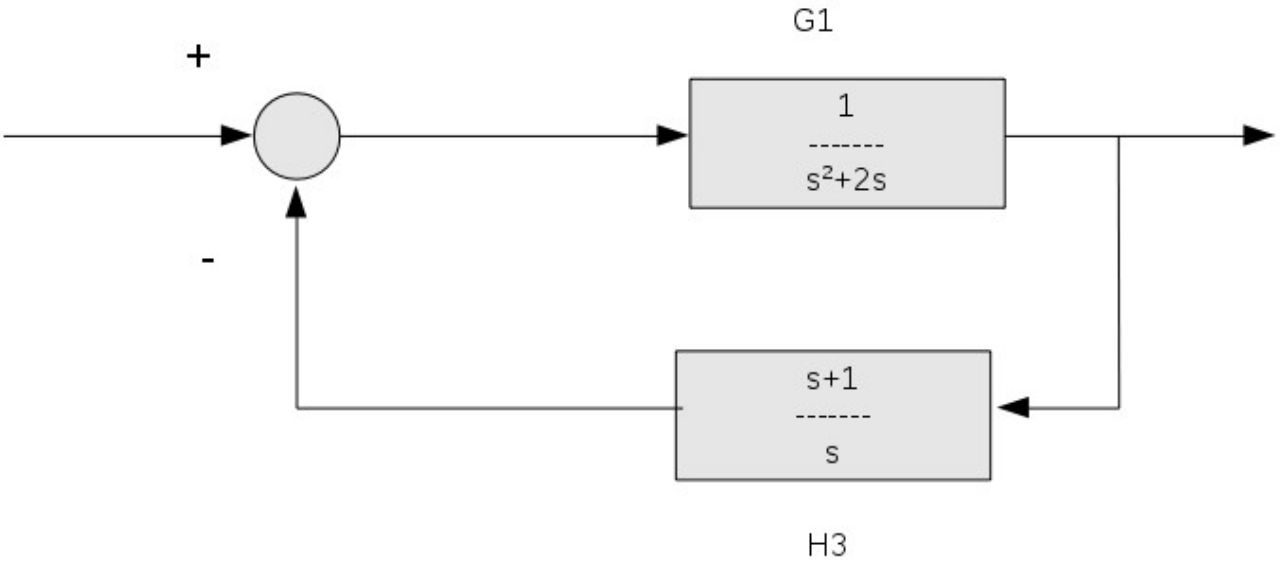
Tenemos esta funcion G1 y H1



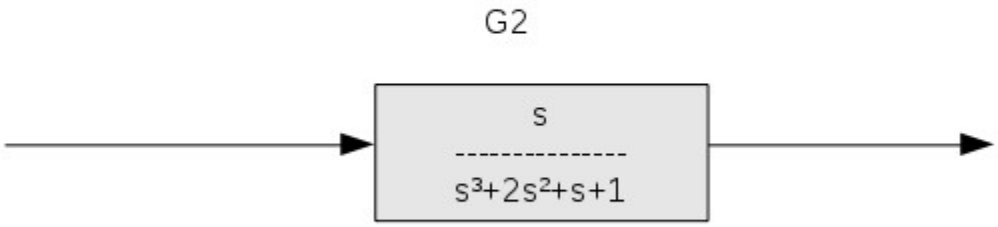
Se añade H2 en Serie



Se forma H3



Y al final queda G2



Se comprueba con Octave

```
octave:1> n1=[1];
octave:2> d1=[1,2,0];
octave:3> n2=[1];
octave:4> d2=[1,0];
octave:5> n3=[1,1];
octave:6> d3=[1];
octave:7> G1=tf(n1,d1)

Transfer function 'G1' from input 'u1' to output ...

          1
 y1:  ---------
      s^2 + 2 s

Continuous-time model.
octave:8> H1=tf(n2,d2)

Transfer function 'H1' from input 'u1' to output ...

      1
 y1:  -
      s

Continuous-time model.
octave:9> H2=tf(n3,d3)

Transfer function 'H2' from input 'u1' to output ...

 y1:  s + 1

Continuous-time model.
octave:10> H3=series(H1,H2)

Transfer function 'H3' from input 'u1' to output ...

      s + 1
 y1:  -----
        s

Continuous-time model.
octave:11> G2=feedback(G1,H3)

Transfer function 'G2' from input 'u1' to output ...

                s
 y1:  -------------------
      s^3 + 2 s^2 + s + 1
```

```
octave:21> [z,p,k]=tf2zp(G2)
z = 0
p =

  -1.75488 + 0.00000i
  -0.12256 + 0.74486i
  -0.12256 - 0.74486i

k =  1
```

```
Continuous-time model.
octave:12> step(G2)
```