```
% Block Diagram Reduction
G1 = tf([1], [1 10])
G2 = tf([1], [1 1])
G3 = tf([1 0 1], [1 4 4])
G4 = tf([1 1], [1 6])
H1 = tf([1 1], [1 2])
H2 = tf([2], [1])
H3 = tf([1], [1])

H2 = H2/G4
sys = feedback(series(G3,G4), H1, +1)
sys = feedback(series(G2, sys), H2, -1)
sys = feedback(series(G1, sys), H3, -1)
```

G1 =

```
    1
  ------
  s + 10
```

Continuous-time transfer function.

G2 =

```
    1
  -----
  s + 1
```

Continuous-time transfer function.

G3 =

```
    s^2 + 1
  -------------
  s^2 + 4 s + 4
```

Continuous-time transfer function.

G4 =

```
  s + 1
  -----
  s + 6
```

Continuous-time transfer function.

H1 =

```
    s + 1
    -----
    s + 2
```

Continuous-time transfer function.

H2 =

    2

Static gain.

H3 =

    1

Static gain.

H2 =

```
    2 s + 12
    --------
     s + 1
```

Continuous-time transfer function.

sys =

```
    s^4 + 3 s^3 + 3 s^2 + 3 s + 2
    ----------------------------
     10 s^3 + 46 s^2 + 78 s + 47
```

Continuous-time transfer function.

sys =

```
         s^5 + 4 s^4 + 6 s^3 + 6 s^2 + 5 s + 2
    --------------------------------------------------
    12 s^5 + 84 s^4 + 222 s^3 + 291 s^2 + 212 s + 71
```

Continuous-time transfer function.

sys =

```
                  s^5 + 4 s^4 + 6 s^3 + 6 s^2 + 5 s + 2
    -----------------------------------------------------------------
    12 s^6 + 205 s^5 + 1066 s^4 + 2517 s^3 + 3128 s^2 + 2196 s + 712
```